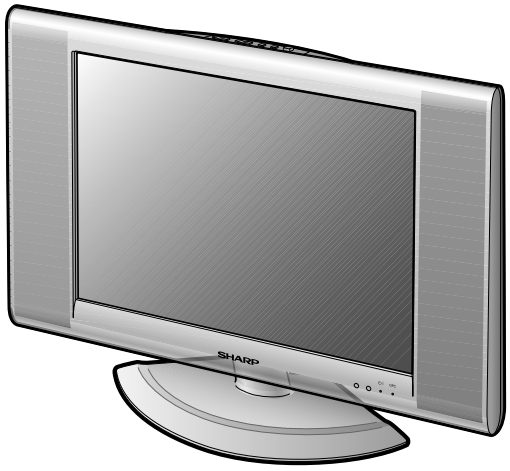
SHARP

SERVICE MANUAL

S15D7LC20SH2E



LCD COLOUR TELEVISION

MODEL LC-20SH2E

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used.

OUTLINE

This model is based on the LC-20SH1E and differs mainly in appearance. This Service Manual covers only the modifications from the LC-20SH1E. For other technical points, refer back to the LC-20SH1E Service Manual (S04B1LC20SH1E).

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SHARP CORPORATION

IMPORTANT SERVICE SAFETY PRECAUTION

■ **Service work should be performed only by qualified service technicians who are thoroughly familiar with all safety checks and the servicing guidelines which follow:**

WARNING

1. For continued safety, no modification of any circuit should be attempted.
2. Disconnect AC power before servicing.

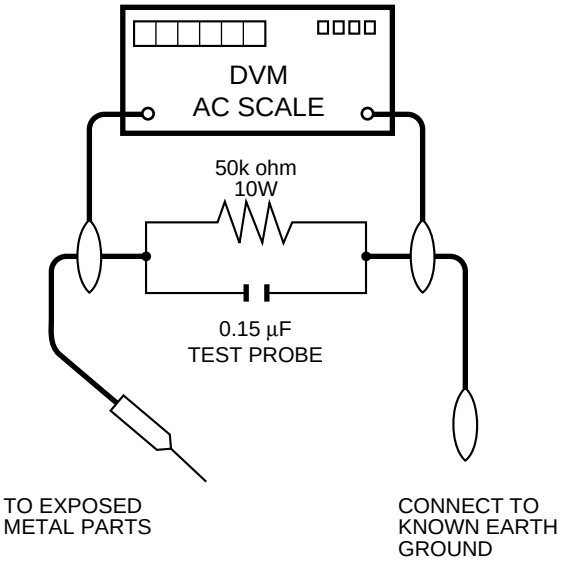
CAUTION: FOR CONTINUED PROTECTION AGAINST A RISK OF FIRE REPLACE ONLY WITH SAME TYPE F6700 (1.25A, 250V), F6701 (1.25A, 250V), F6702 (1.25A, 250V), F6703 (1.25A, 250V) F6704 (1.25A, 250V) AND F7701 (3.15A, 250V) FUSE.

BEFORE RETURNING THE RECEIVER (Fire & Shock Hazard)

Before returning the receiver to the user, perform the following safety checks:

1. Inspect all lead dress to make certain that leads are not pinched, and check that hardware is not lodged between the chassis and other metal parts in the receiver.
2. Inspect all protective devices such as non-metallic control knobs, insulation materials, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacitor networks, mechanical insulators, etc.
3. To be sure that no shock hazard exists, check for leakage current in the following manner.

- Plug the AC cord directly into a 220~240 volt AC outlet.
- Using two clip leads, connect a 50k ohm, 10 watt resistor paralleled by a 0.15µF capacitor in series with all exposed metal cabinet parts and a known earth ground, such as electrical conduit or electrical ground connected to an earth ground.
- Use an AC voltmeter having with 5000 ohm per volt, or higher, sensitivity or measure the AC voltage drop across the resistor.
- Connect the resistor connection to all exposed metal parts having a return to the chassis (antenna, metal cabinet, screw heads, knobs and control shafts, escutcheon, etc.) and measure the AC voltage drop across the resistor.
  All checks must be repeated with the AC cord plug connection reversed. (If necessary, a nonpolarized adaptor plug must be used only for the purpose of completing these checks.)
  Any reading of 0.75V peak (this corresponds to 0.5 mA. peak AC.) or more is excessive and indicates a potential shock hazard which must be corrected before returning the monitor to the owner.



SAFETY NOTICE

Many electrical and mechanical parts in LCD television have special safety-related characteristics.
These characteristics are often not evident from visual inspection, nor can protection afforded by them be necessarily increased by using replacement components rated for higher voltage, wattage, etc.
Replacement parts which have these special safety characteristics are identified in this manual; electrical components having such features are identified by " ⚠ " and shaded areas in the ***Replacement Parts Lists and Schematic Diagrams.***
For continued protection, replacement parts must be identical to those used in the original circuit.
The use of a substitute replacement parts which do not have the same safety characteristics as the factory recommended replacement parts shown in this service manual, may create shock, fire or other hazards.

Precautions for using lead-free solder

1 Employing lead-free solder

"MAIN PWB" of this model employs lead-free solder. The LF symbol indicates lead-free solder, and is attached on the PWBs and service manuals. The alphabetical character following LF shows the type of lead-free solder.

Example:

Indicates lead-free solder of tin, silver and copper.

2 Using lead-free wire solder

When fixing the PWB soldered with the lead-free solder, apply lead-free wire solder. Repairing with conventional lead wire solder may cause damage or accident due to cracks.

As the melting point of lead-free solder (Sn-Ag-Cu) is higher than the lead wire solder by 40°C, we recommend you to use a dedicated soldering bit, if you are not familiar with how to obtain lead-free wire solder or soldering bit, contact our service station or service branch in your area.

3 Soldering

As the melting point of lead-free solder (Sn-Ag-Cu) is about 220°C which is higher than the conventional lead solder by 40°C, and as it has poor solder wettability, you may be apt to keep the soldering bit in contact with the PWB for extended period of time. However, Since the land may be peeled off or the maximum heat-resistance temperature of parts may be exceeded, remove the bit from the PWB as soon as you confirm the steady soldering condition.

Lead-free solder contains more tin, and the end of the soldering bit may be easily corroded. Make sure to turn on and off the power of the bit as required.

If a different type of solder stays on the tip of the soldering bit, it is alloyed with lead-free solder. Clean the bit after every use of it.

When the tip of the soldering bit is blackened during use, file it with steel wool or fine sandpaper.

Be careful when replacing parts with polarity indication on the PWB silk.

Lead-free wire solder for servicing

Part No.	★	Description		Code
ZHNDAi123250E	J	ϕ0.3mm	250g(1roll)	BL
ZHNDAi126500E	J	ϕ0.6mm	500g(1roll)	BK
ZHNDAi12801KE	J	ϕ1.0mm	1kg(1roll)	BM

Precautions on removing the Sub PWB

- **CAUTION**

  Before taking out and servicing the Sub unit, be sure to discharge the C7703 electrolytic capacitor. Otherwise you may get an electric shock by the capacitor’s charging voltage.

SPECIFICATIONS

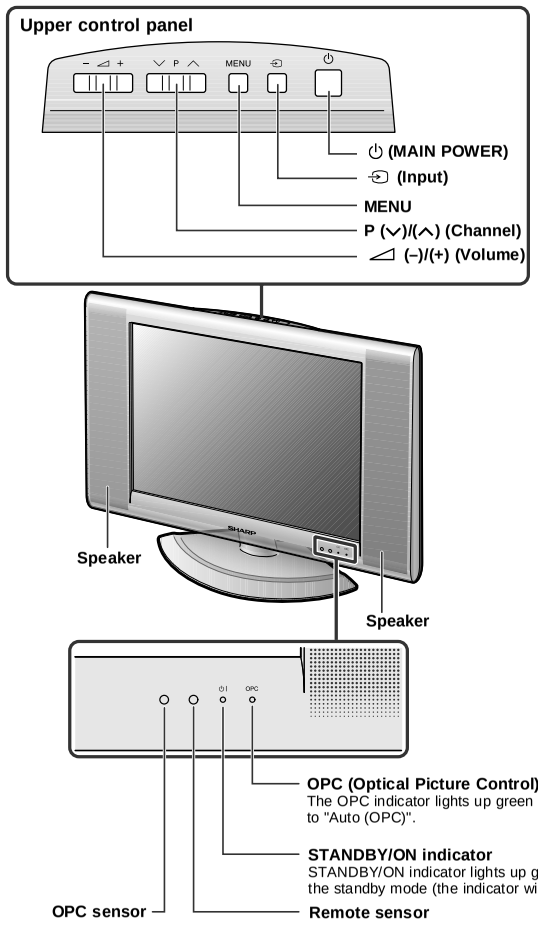
Items \ Model		LC-20SH2E
LCD panel		20" Advanced Super View & BLACK TFT LCD
Number of dots		921,600 dots
Video colour system		PAL/SECAM/NTSC
TV	TV-Standard (CCIR)	B/G, I, D/K, L/L'
	TV-Tuning System	Auto preset 200 ch.
	STEREO/BILINGUAL	NICAM, A2 stereo
	AUTO PRESET	YES
	CATV	~Hyper Band
Brightness		430 cd/m^2
Viewing angles		H: 170° V: 170°
Audio amplifier		2.1 W × 2
Speakers		11 cm × 4 cm 2 pcs.
Terminals	EXT1	21-pin Euro-SCART
	EXT2	S-VIDEO, VIDEO, AUDIO
	OUT	AUDIO
	Antenna	DIN
	Headphones	3.5 mm ø jack (side)
OSD language		English/Spanish/German/French/Italian/Swedish/Dutch/Russian/Portuguese/ Turkish/Greek/Finnish/Polish
Power requirement		AC 220 V–240 V, 50/60 Hz
Power consumption		74 W (1.0 W Standby) AC 220 V–240 V
Weight (approx.)		7.1 kg, w/o accessories

■As a part of policy of continuous improvement, SHARP reserves the right to make design and specification changes for the LCD TV set improvement without prior notice. The performance specification figures indicated are nominal values of production units. There may be some deviations from these values in individual units.

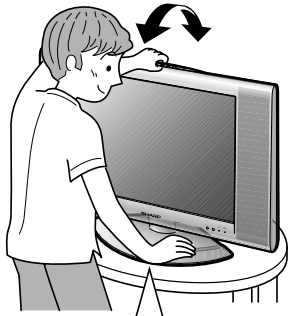
Part Names of the Main Unit

The examples used throughout this manual are based on the LC-20SH2E model.

Controls


Upper control panel
MENU
(MAIN POWER)
(Input)
MENU
P (∨)/(∧) (Channel)
(–)/(+) (Volume)
Speaker
Speaker
OPC
OPC (Optical Picture Control) indicator
The OPC indicator lights up green when the "Backlight" is set to "Auto (OPC)".
STANDBY/ON indicator
STANDBY/ON indicator lights up green when the power is on, and red when in the standby mode (the indicator will not light when the main power is off).
OPC sensor
Remote sensor

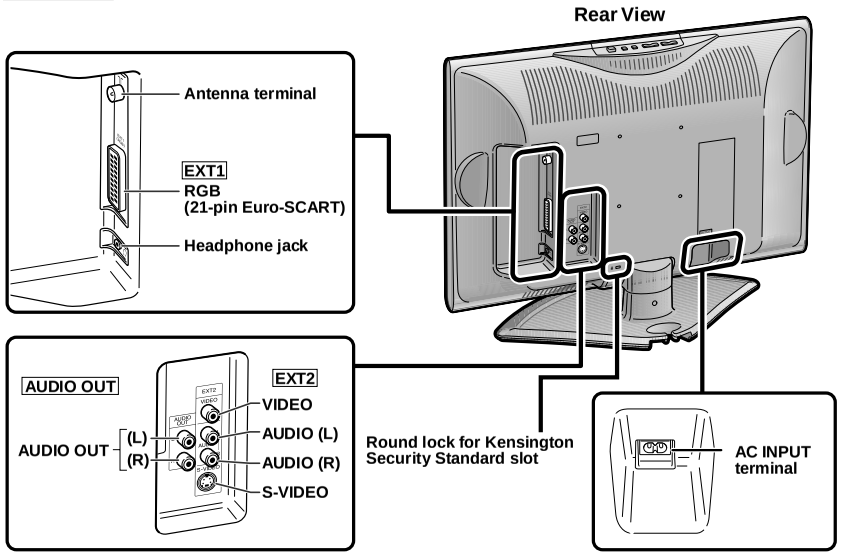
■ How to adjust the angle



Tilt the display by holding the upper part while securely holding down the stand with your other hand.

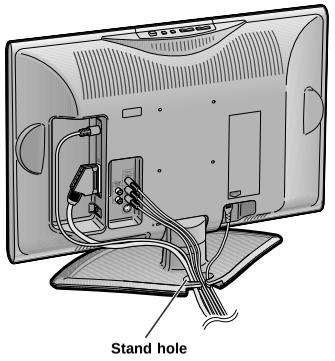
To change the vertical angle of the LCD TV set, tilt the screen up to 5 degrees forwards or 10 degrees backwards. Please adjust the angle so that the LCD TV set can be watched most comfortably.

Terminals



How to Fix the Cables

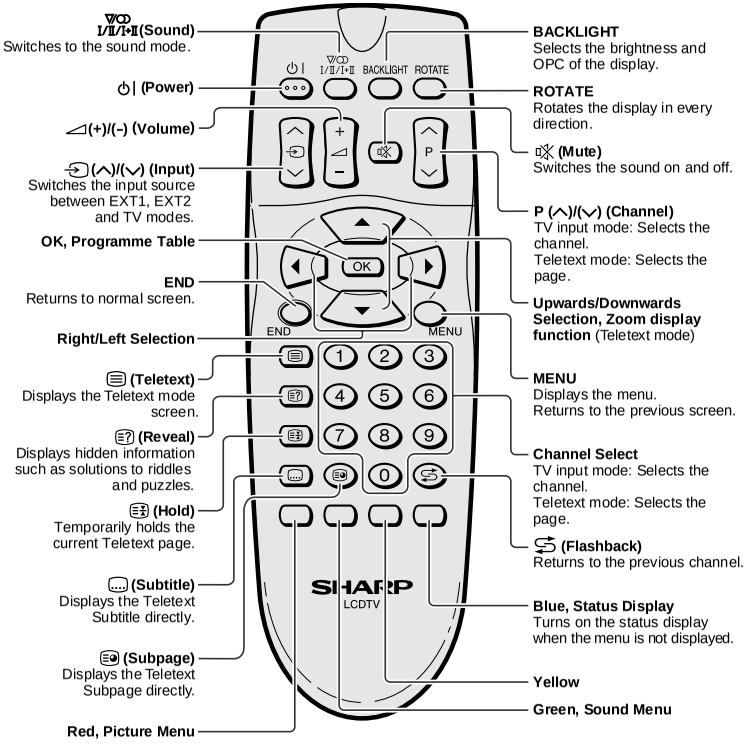
Pull the cables connected to each terminal. Insert it to the stand hole and fix the cables.



NOTE

- **(Input)**, **P (∨)/(∧)(Channel)**, **(–)/(+) (Volume)** and **MENU** on the control panel of the main unit have the same functions as the same buttons on the remote control (see page 12). Fundamentally, this operation manual provides a description based on operation using the remote control.

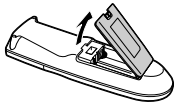
Part Names of the Remote Control



Installing Batteries in the Remote Control

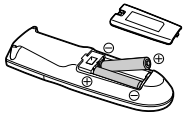
Before using the LCD TV set for the first time, install the two "AA" size batteries (supplied) in the remote control. When the batteries become depleted and the remote control fails to operate, replace the batteries with new "AA" size batteries.

1 Open the battery cover.



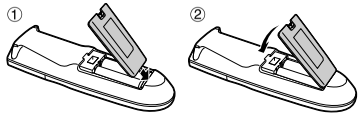
- Detach the cover while pressing the (▼) part.

2 Insert two "AA" size batteries.



- Place batteries with their terminals corresponding to the (+) and (–) indications in the battery compartment.

3 Close the battery cover.



- Align the tab on the battery cover (①) and place it while pressing the tab (②) to close it.

⚠ Caution!

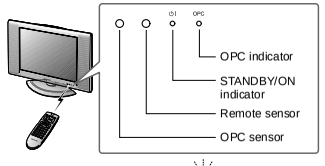
Precautions regarding batteries

Improper use of batteries can result in a leakage of chemicals and/or explosion. Be sure to follow the instructions below.

- Place batteries with their terminals corresponding to the (+) and (–) indications.
- Different types of batteries have different characteristics. Do not mix batteries of different types.
- Do not mix old and new batteries. Mixing old and new batteries can shorten the life of new batteries and/or cause old batteries to leak chemicals.
- Remove batteries as soon as they are depleted. Chemicals that leak from batteries can cause a rash. If chemical leakage is found, wipe it off with a cloth.
- The batteries supplied with the LCD TV set may have a shorter operating time due to storage conditions.
- If the remote control is not to be used for an extended period of time, remove the batteries from the remote control.

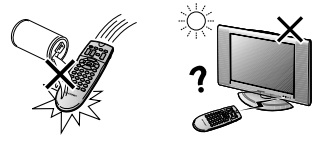
Using the Remote Control

Use the remote control by pointing it towards the remote sensor window of the main unit. Objects between the remote control and sensor window may prevent proper operation.



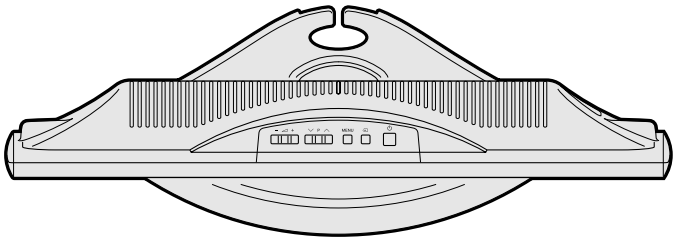
Cautions regarding use of the remote control

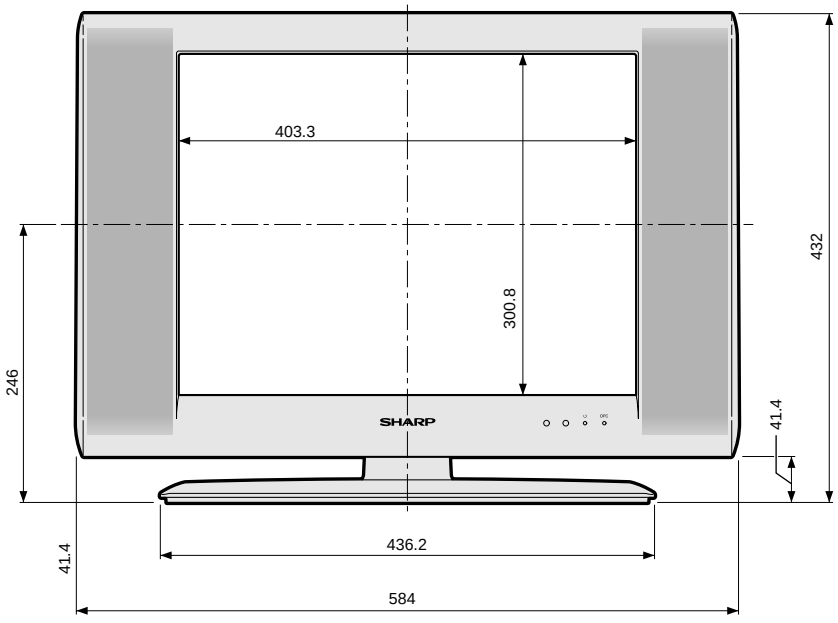
- Do not apply shock to the remote control. In addition, do not expose the remote control to liquids, and do not place it in an area with high humidity.
- Do not install or place the remote control under direct sunlight. The heat may cause deformation of the unit.
- The remote control may not work properly if the remote sensor window is under direct sunlight or strong lighting. In such a case, change the angle of the lighting or main unit, or operate the remote control closer to the remote sensor window.

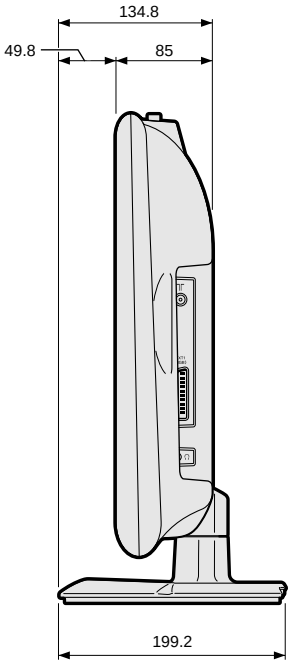


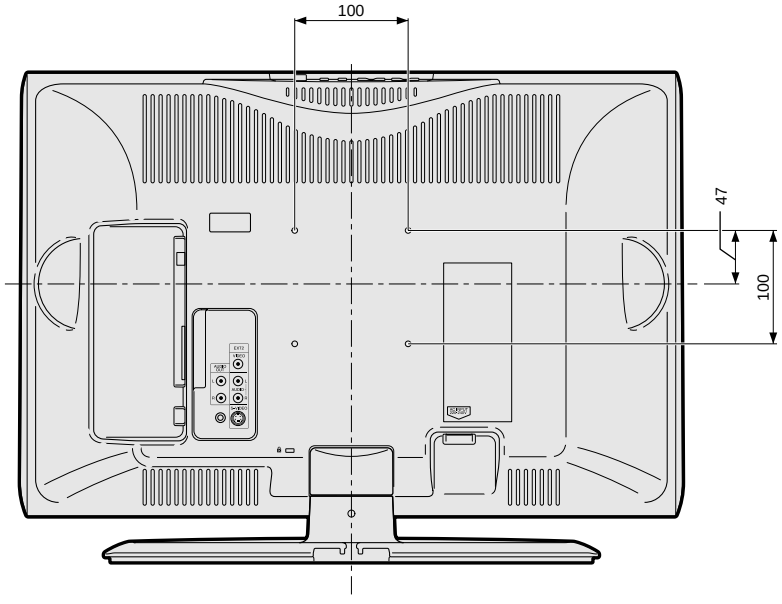
DIMENSIONS

Unit: mm



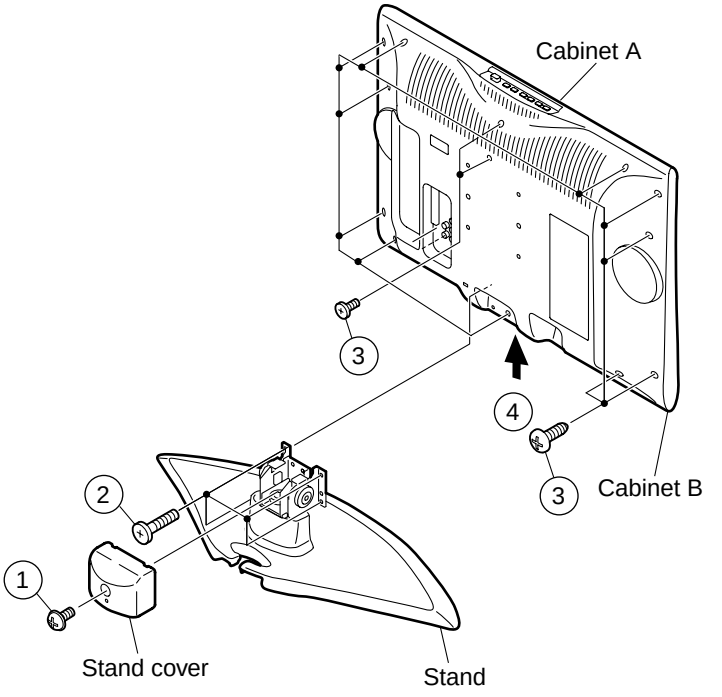


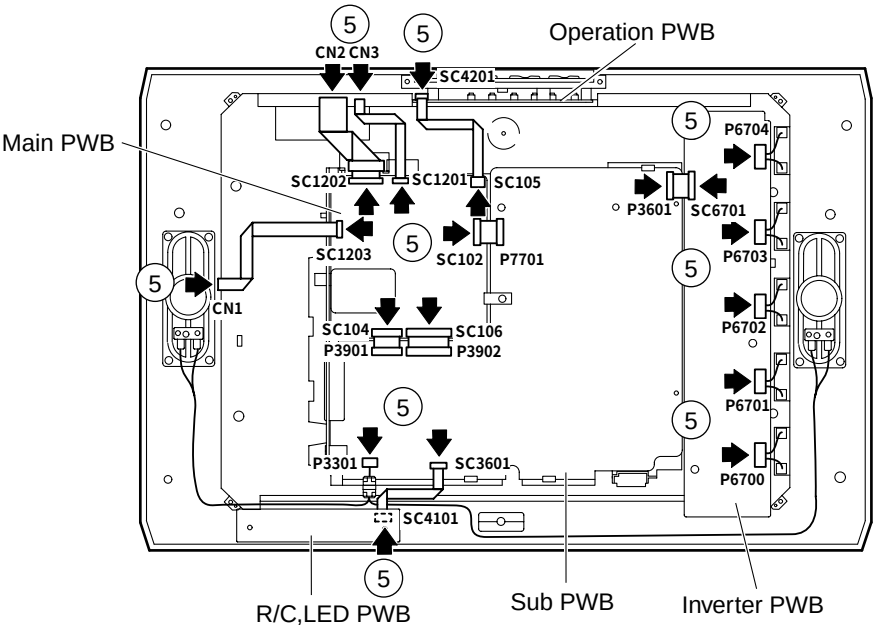




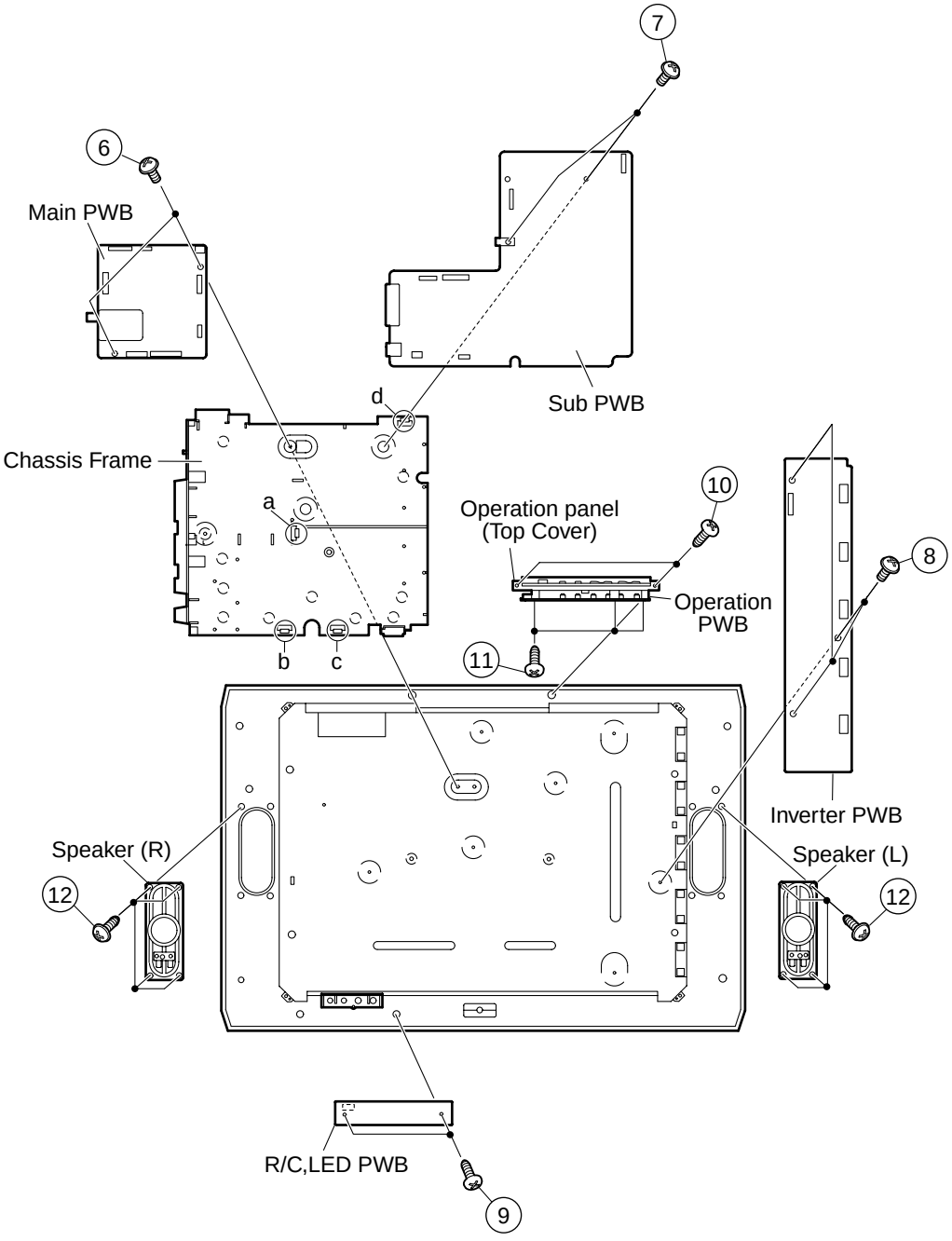
REMOVING OF MAJOR PARTS

1. Remove the stand cover fixing screws (1 pcs.).
2. Remove the stand fixing screws (4 pcs.).
3. Remove the cabinet B fixing screws (13 pcs.).
4. Remove the cabinet B after opening from the direction of an arrow.
5. Detach the connector from each PWB.



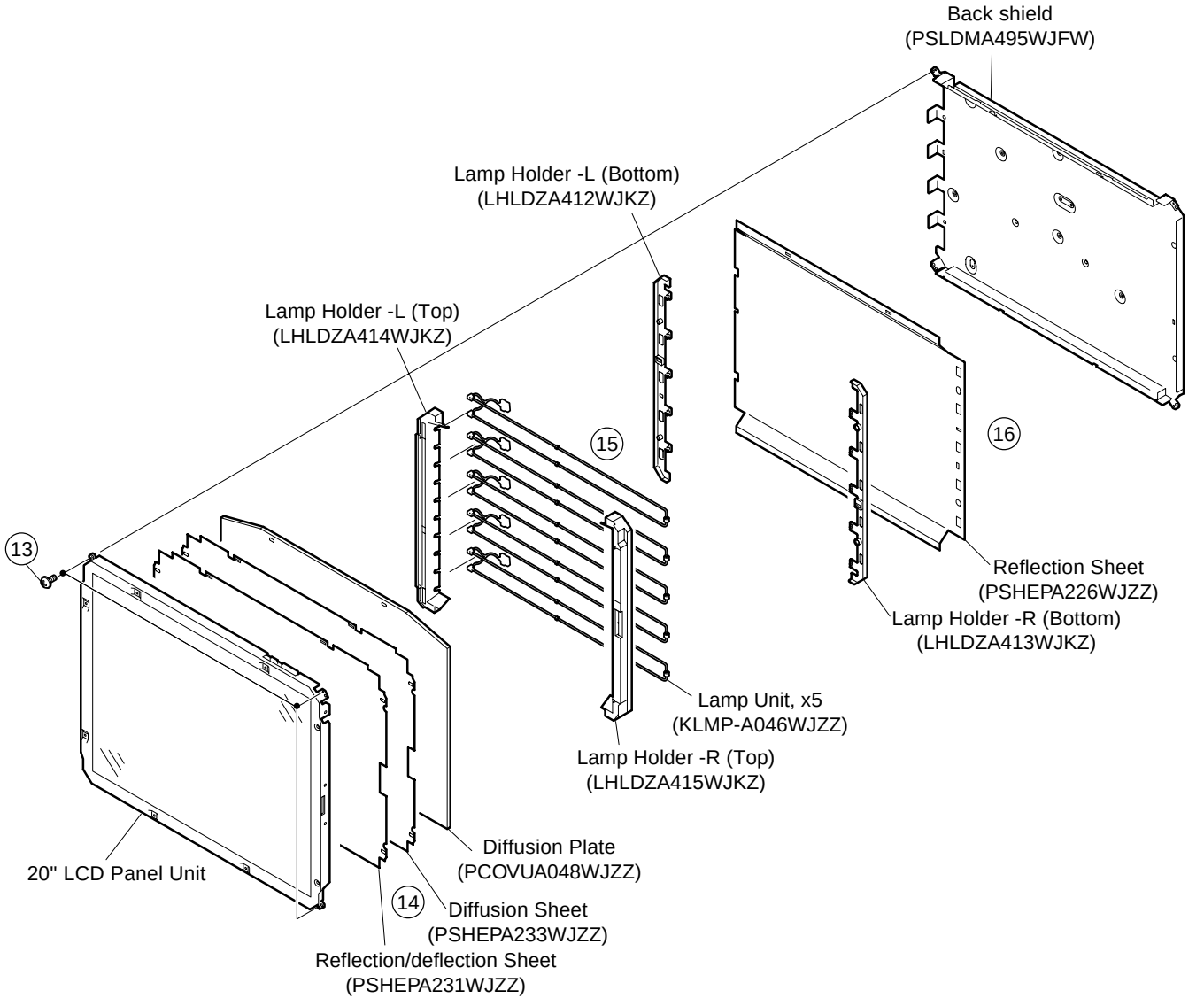


6. Remove the 2 lock screws from the main PWB and undo the hooks a. Detach the chassis frame, together with its terminals, from the main PWB.
7. Remove the 2 lock screws from the sub PWB and undo the hooks b, c and d. Detach the chassis frame together with its terminals, from the sub PWB.
8. Remove the 3 lock screws from the inverter PWB and take out the inverter PWB.
9. Remove the 2 lock screws from the R/C, LED PWB and take out the R/C, LED PWB.
10. Remove the 2 lock screws from the operation panel (top cover), and detach the operation panel (top cover).
11. Remove the 3 lock screws from the operation PWB, and detach the operation PWB.
12. Remove the 4 lock screws each from the right and left speakers and take out both the speakers.



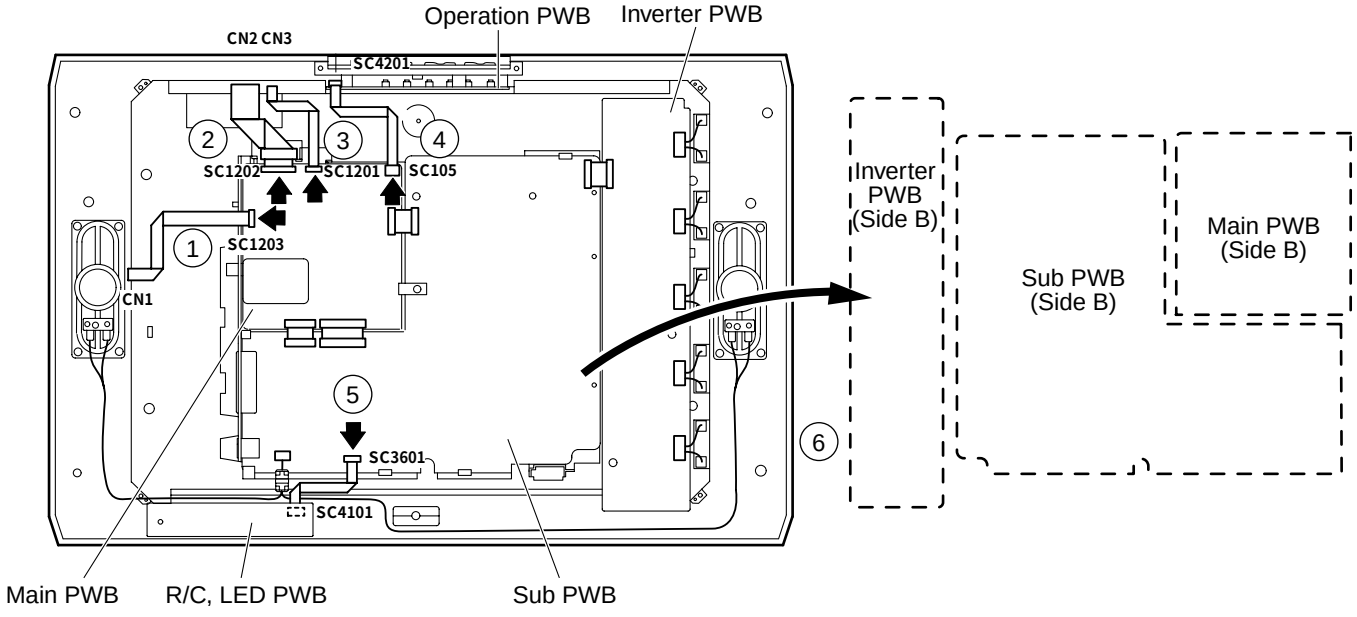
- Precautions in handling the LCD panels
  1. Work in a clean room (with humidities below 50%).
  2. Be sure to wear an anti-static armband.
  3. Handle the panels on an electro-conductive mat.
  4. Be careful not to fall, shake and shock the panels.

13. Remove the 3 lock screws from the LCD panel and detach the LCD panel.
14. Remove the reflection/deflection sheet, diffusion sheet and diffusion plate.
15. Detach the lamp holders -R (top), -L (top) and -R (bottom), -L (bottom) from the lamp unit.
16. Detach the reflection sheet from the back shield.



- **Precautions at the time of the side B(back) service of main, sub and Inverter unit.**

1. Remove only SC1203 of the FFC for connection between Main unit (SC1203) and LCD panel, and connect the extended cable (QCNW-A553WJZZ) for service.
2. Remove only SC1202 of the FFC for connection between Main unit (SC1202) and LCD panel, and connect the extended cable (QCNW-A556WJZZ) for service.
3. Remove only SC1201 of the FFC for connection between Main unit (SC1201) and LCD panel, and connect the extended cable (QCNW-A555WJZZ) for service.
4. Remove only SC105 of the FFC for connection between Main unit (SC105) and Operation unit (SC4201), and connect the extended cable (QCNW-D444WJQZ) for service.
5. Remove only SC3601 of the FFC for connection between Sub unit (SC3601) and R/C, LED unit (SC4101), and connect the extended cable (QCNW-D445WJQZ) for service.
6. Remove the PWB unit fixing screws (main unit : 2pcs, sub unit : 2pcs., inverter unit : 3pcs.)



Step	Part No.	Description
1	QCNW-A553WJZZ	Extension Cable 30-pin Main (SC1203)-LCD Panel
2	QCNW-A556WJZZ	Extension Cable 50-pin Main (SC1202)-LCD panel
3	QCNW-A555WJZZ	Extension Cable 20-pin Main (SC1201)-LCD panel
4	QCNW-D444WJQZ	Extension Cable 5-pin Operation (SC4201)-Main (SC105)
5	QCNW-D445WJQZ	Extension Cable 8-pin R/C, LED (SC4101)-Sub (SC3601)

DESCRIPTION OF SCHEMATIC DIAGRAM

VOLTAGE MEASUREMENT CONDITION:

1. The voltages at test points are measured on the stable supply voltage of AC 220-240V. Signals are fed by a colour bar signal generator for servicing purpose and the above voltages are measured with a 20k ohm/V tester.

INDICATION OF RESISTOR & CAPACITOR:

RESISTOR

1. The unit of resistance "Ω" is omitted. (K=kΩ=1000 Ω, M=MΩ).
2. All resistors are ± 5%, unless otherwise noted. (K= ± 10%, F= ± 1%, D= ± 0.5%)
3. All resistors are 1/16W, unless otherwise noted.

CAPACITOR

1. All capacitors are μF, unless otherwise noted. (P=pF=μμF).
2. All capacitors are 50V, unless otherwise noted.

CAUTION:
This circuit diagram is original one, therefore there may be a slight difference from yours.

SAFETY NOTES:

1.DISCONNECT THE AC PLUG FROM THE AC OUTLET BEFORE REPLACING PARTS.
2.SEMICONDUCTOR HEAT SINKS SHOULD BE REGARDED AS POTENTIAL SHOCK HAZARDS WHEN THE CHASSIS IS OPERATING.

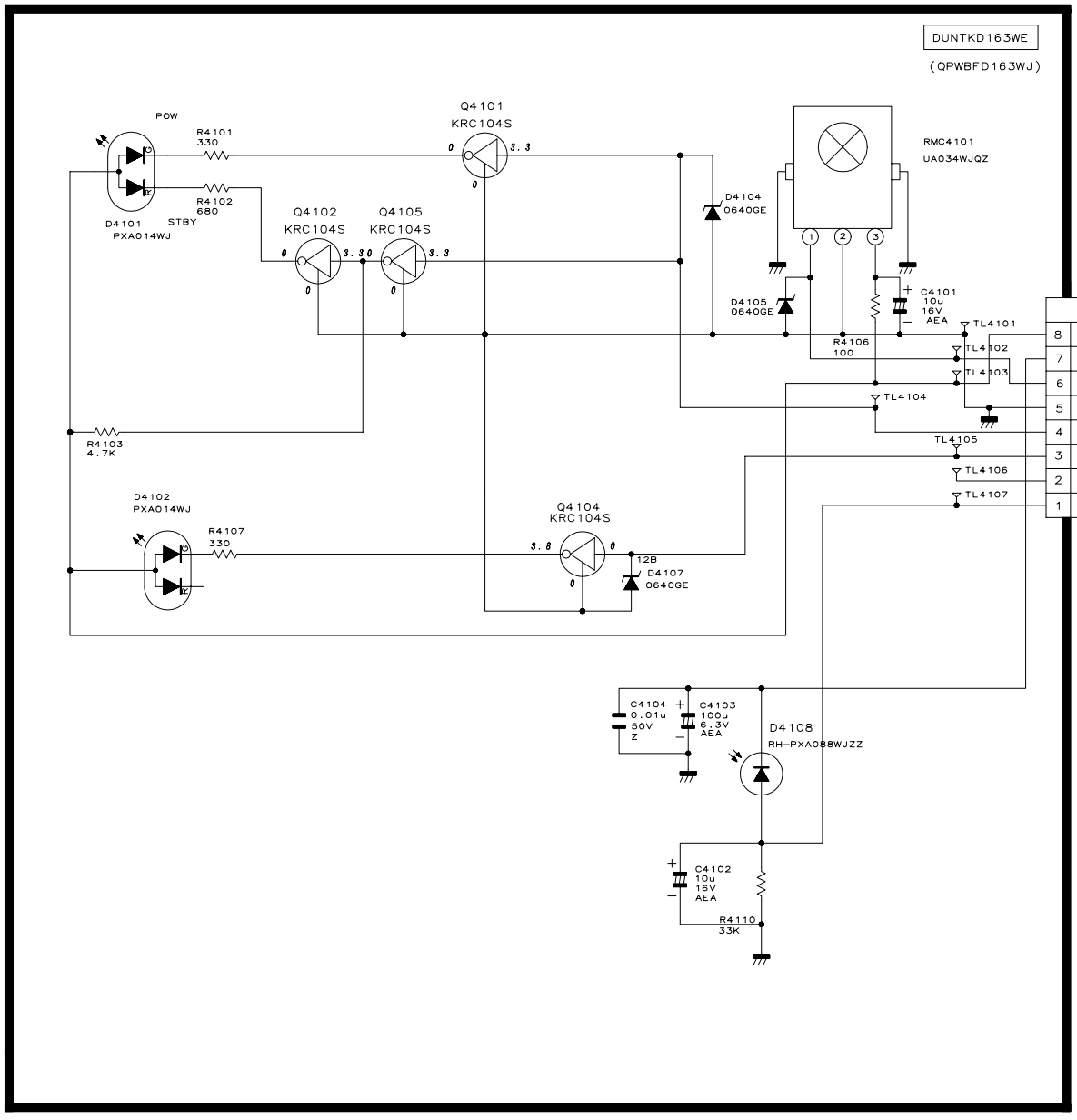
IMPORTANT SAFETY NOTICE:

PARTS MARKED WITH "⚠" ( ) ARE IMPORTANT FOR MAINTAINING THE SAFETY OF THE SET. BE SURE TO REPLACE THESE PARTS WITH SPECIFIED ONES FOR MAINTAINING THE SAFETY AND PERFORMANCE OF THE SET.

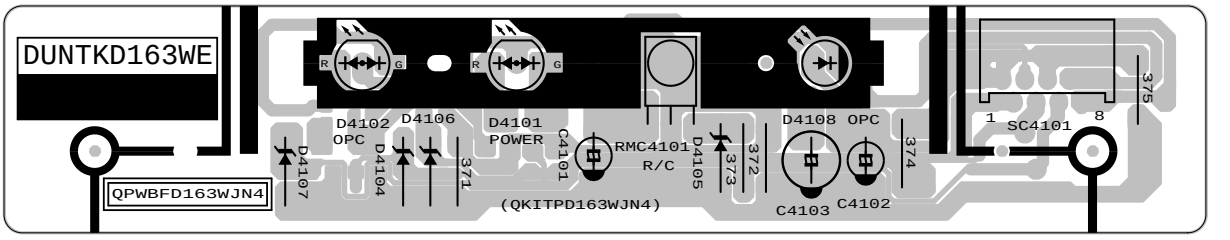
SCHEMATIC DIAGRAM

■ R/C, LED Unit

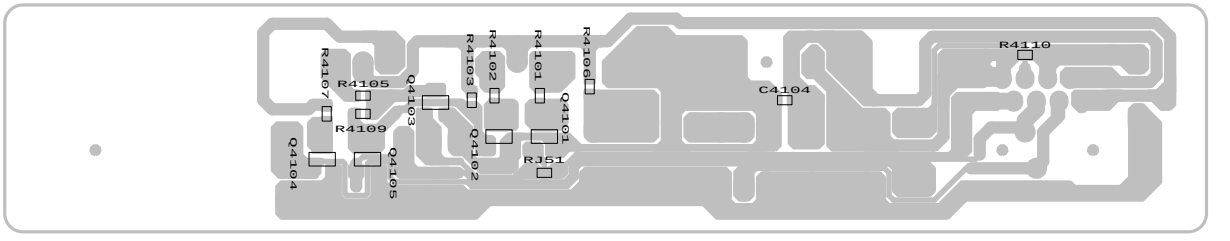
LED UNIT



PRINTED WIRING BOARD ASSEMBLIES



R/C, LED Unit (Wiring Side)



R/C, LED Unit (Chip Parts Side)

PARTS LIST

PARTS REPLACEMENT

Replacement parts which have these special safety characteristics identified in this manual; electrical components having such features are identified by ⚠ and shaded areas in the Replacement Parts Lists and Schematic Diagrams. The use of a substitute replacement part which does no have the same safety characteristic as the factory recommended replacement parts shown in this service manual may create shock, fire or other hazards.

"HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following informations.

1. MODEL NUMBER
2. REF. NO.
3. PART NO.
4. DESCRIPTION

★ MARK: SPARE PARTS-DELIVERY SECTION

Ref. No.	Part No.	★	Description	Code

PRINTED WIRING BOARD ASSEMBLIES
(NOT REPLACEMENT ITEM)

DUNTKC856FM01	–	INVERTER Unit	—
DUNTKC857WE07	–	SUB Unit	—
DUNTKC858WE07	–	OPERATION Unit	—
DUNTKC860FM03	–	MAIN Unit	—
DUNTKD163WE07	–	R/C, LED Unit	—

LCD PANEL

NOTE: THE PARTS HERE SHOWN ARE SUPPLIED AS AN ASSEMBLY BUT NOT INDEPENDENTLY.

RLCDTA025WJZZ	J	20" LCD Panel Unit	DB

Ref. No.	Part No.	★	Description	Code

DUNTKD163WE07
R/C, LED Unit

TRANSISTORS

Q4101	VSKRC104S//-1Y	J	KRC104S	AA
Q4102	VSKRC104S//-1Y	J	KRC104S	AA
Q4104	VSKRC104S//-1Y	J	KRC104S	AA
Q4105	VSKRC104S//-1Y	J	KRC104S	AA

DIODES

D4101	RH-PXA014WJZZ+	J	STANDBY/ON Indicator	AD
D4102	RH-PXA014WJZZ+	J	OPC Indicator	AD
D4104	RH-EX0640GEZZY	J	Zener Diode	AA
D4105	RH-EX0640GEZZY	J	Zener Diode	AA
D4107	RH-EX0640GEZZY	J	Zener Diode	AA
D4108	RH-PXA088WJZZ	J	OPC Sensor	AG

CAPACITORS

C4101	VCEAEA1CW106M+	J	10	16V	Electrolytic	AB
C4102	VCEAEA1CW106M+	J	10	16V	Electrolytic	AB
C4103	VCEAEA0JW107M+	J	100	6.3V	Electrolytic	AB
C4104	VCKYCY1HF103ZY	J	0.01	50V	Ceramic	AA

RESISTORS

R4101	VRS-CY1JF331JY	J	330	1/16W	Metal Oxide	AA
R4102	VRS-CY1JF681JY	J	680	1/16W	Metal Oxide	AA
R4103	VRS-CY1JF472JY	J	4.7k	1/16W	Metal Oxide	AA
R4106	VRS-CY1JF101JY	J	100	1/16W	Metal Oxide	AA
R4107	VRS-CY1JF331JY	J	330	1/16W	Metal Oxide	AA
R4110	VRS-CY1JF333JY	J	33k	1/16W	Metal Oxide	AA

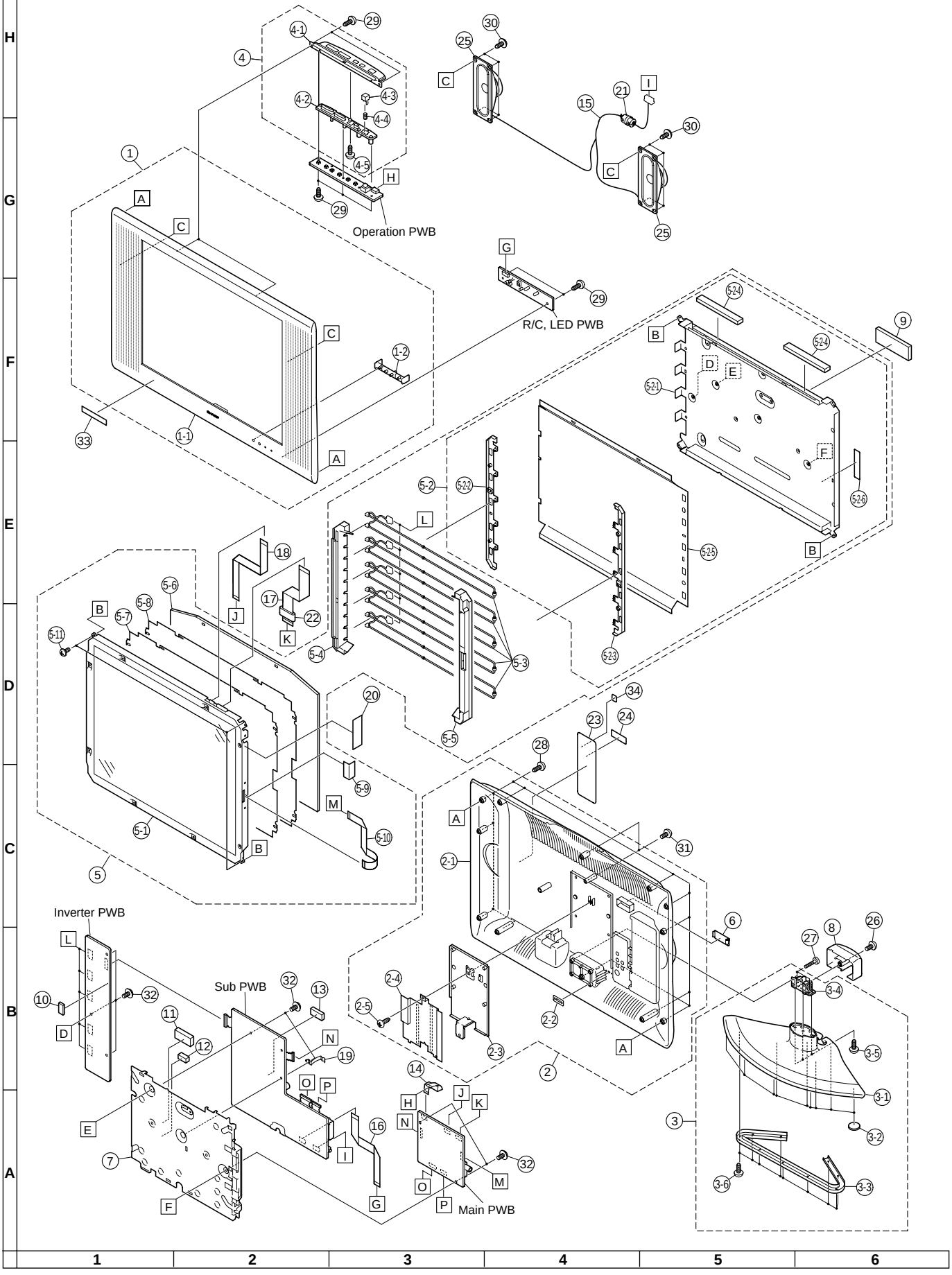
MISCELLANEOUS PARTS

SC4101	QSOCN0896REZZ	J	Socket, 8-pin	AC
RMC4101	RRMCUA034WJQZ	J	R/C Receiver	AE
	LHLDZA555WJZZ	S	LED Holder	

CABINET AND MECHANICAL PARTS

Ref. No.	Part No.	★	Description	Code
1	CCABAA851WJ01	S	Cabinet A Ass'y	
1-1	*Not Available*	–	Cabinet A	—
1-2	HDECQA452WJSA	S	R/C, LED Cover	
2	CCABBA539WJ01	S	Cabinet B Ass'y	
2-1	*Not Available*	–	Cabinet B	—
2-2	LANGFA085WJFW	J	Kensington Angle	AC
2-3	LANGTA193WJFW	S	Reinforcement Angle	
2-4	PZETKA123WJZZ	S	Insulating Spacer, x1	
2-5	XEBSN30P08000	J	Screw, x1	AA
3	CDAi-A181WJ01	J	Stand Ass'y	BG
3-1	*Not Available*	–	Stand, Base	—
3-2	GLEGGA010WJZZ	J	Rubber Leg, x9	AC
3-3	LANGFA168WJFW	S	Reinforcement Angle	
3-4	MHNG-A119WJ01	S	Swivel Hinge	
3-5	XBPSN40P14JS0	J	Screw, x3	AB
3-6	XEBS940P10000	J	Screw, x9	AB
4	CCOVAA976WJ01	S	Top Cover Ass'y	AP
4-1	*Not Available*	–	Top Cover	—
4-2	JBTN-A353WJSA	S	Operation Button	
4-3	JBTN-A354WJSA	S	Power Button	
4-4	MSPRCA014WJFW	J	Spring, for Power Button	AB
4-5	XEBSN30P08000	J	Screw, x1	AA
5	*Not Available*	–	20" LCD Panel Unit Ass'y	—
5-1	RLCDTA025WJZZ	J	20" LCD Panel Unit"	DB
5-2	*Not Available*	–	Back Shield Ass'y	—
5-2-1	PSLDMA495WJFW	J	Back Shield	AW
5-2-2	LHLDZA412WJKZ	J	Lamp Holder-L(Bottom)	AG
5-2-3	LHLDZA413WJKZ	J	Lamp Holder-R(Bottom)	AF
5-2-4	PMLT-A150WJZZ	J	Light Shielding Spacer, x2	AD
5-2-5	PSHEPA226WJZZ	J	Reflection Sheet	AN
5-2-6	TCAUZA031WJZZ	J	Caution Label	AB
⚠ 5-3	KLMP-A046WJZZ	J	Lamp Unit, x5	AV
5-4	LHLDZA414WJKZ	J	Lamp Holder-L(Top)	AL
5-5	LHLDZA415WJKZ	J	Lamp Holder-R(Top)	AL
5-6	PCOVUA048WJZZ	J	Diffusion Plate	AY
5-7	PSHEPA231WJZZ	J	Reflection/deflection Sheet	BB
5-8	PSHEPA233WJZZ	J	Diffusion Sheet	AM
5-9	PSPAZA447WJZZ	J	Spacer, x1	AC
5-10	QCNW-C947WJQZ	J	Connecting Cord	AE
5-11	XBPS726P05J00	J	Screw, x3	AA
6	GCOVAA984WJKA	S	Bass-Conne Cover	AD
7	LCHSMA146WJKA	S	Chassis Frame	AR
8	GCOVAB229WJKA	S	Stand Cover	
9	PSPAZA614WJZZ	S	Spacer, x1	AD
10	PSPAZA615WJZZ	S	Spacer, x1	AB
11	PSPAZA640WJKZ	S	Spacer, x1	AL
12	PSPAZA641WJKZ	S	Spacer, x1	AF
13	PSPAZA642WJKZ	S	Spacer, x1	AH
14	QCNW-B813WJPZ	S	Connecting Cord	AC
15	QCNW-C948WJQZ	S	Connecting Cord	AE
16	QCNW-C949WJQZ	S	Connecting Cord	AC
17	QCNW-D271WJQZ	S	Connecting Cord	AG
18	QCNW-D272WJQZ	S	Connecting Cord	AD
19	QEARPA125WJFW	S	Grounding Part, x1	AC
20	QEARZA041WJZZ	J	Grounding Part, x1	AE
21	RCORF0103CEZZ	J	Ferrite Core	AK
22	RCORFA032WJZZ	J	Ferrite Core	AK
23	TLABMB427WJZZ	S	Model Label (LC-20SH2E/E(F)/E(K)/E(R))	AF
23	TLABMB525WJZZ	S	Model Label(LC-20SH2E(I))	AF
24	*Not Available*	–	Serial No. Label	—
25	VSP1104PB038A	J	Speaker, x2	AK
26	XBBS940P10000	J	Screw, x1	AB
27	XBBS940P18000	J	Screw, x4	AB
28	XEBS940P20000	J	Screw, x11	AB
29	XEBSN30P08000	J	Screw, x7	AA
30	XEBSN40P10000	J	Screw, x8	AB
31	XHBS830P10000	S	Screw, x2	AA
32	XHPS730P08WS0	J	Screw, x7	AA
33	TLABZA792WJZZ	S	EICTA Label	AL
34	TLABSA028WJSA	J	GOST Label(LC-20SH2E(R))	AF

CABINET AND MECHANICAL PARTS



SUPPLIED ACCESSORIES

Ref. No.	Part No.	★	Description	Code
⚠ X1	QACCBA048WJPZ	S	AC Cord (LC-20SH2E(K))	AW
⚠ X1	QACCKA016WJPZ	J	AC Cord (LC-20SH2E/E(F)/E(I)/E(R))	AL
X2	RRMCGA339WJSA	S	Wireless Remote Control	AS
X3	TiNS-B708WJZZ	S	Operation Manua (LC-20SH2E/E(F)/E(I)/E(R))	BA
X4	TiNS-B709WJZZ	S	Instruction Book (LC-20SH2E/E(F))	BA
X5	TiNS-B710WJZZ	S	Instruction Book (LC-20SH2E)	AX
X6	TiNS-B797WJZZ	S	Instruction Book (LC-20SH2E(R))	
X7	TGAN-A077WJZZ	J	Guarantee Card (LC-20SH2E(R))	AE
X8	TGAN-A342WJZZ	S	Guarantee Card (LC-20SH2E(K))	
X9	*Not Available*	–	"AA" size Battery, x2	—

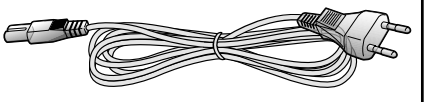
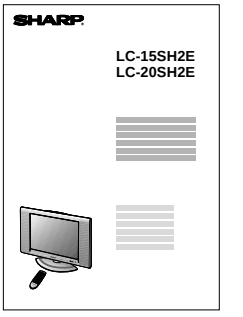
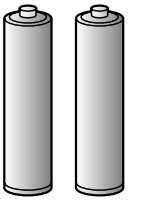
SERVICE JIGS
(USE FOR SERVICING)

	QCNW-A553WJZZ	J	Extension Cable, 30-pin (SC1203-LCD)	BA
	QCNW-A556WJZZ	J	Extension Cable, 50-pin (SC1202-LCD)	AU
	QCNW-A555WJZZ	J	Extension Cable, 20-pin (SC1201-LCD)	AU
	QCNW-D444WJQZ	J	Extension Cable, 5-pin (SC4201-SC105)	AQ
	QCNW-D445WJQZ	J	Extension Cable, 8-pin (SC4101-SC3601)	AQ
	JiGiNF-001	J	Interface Jig	CC

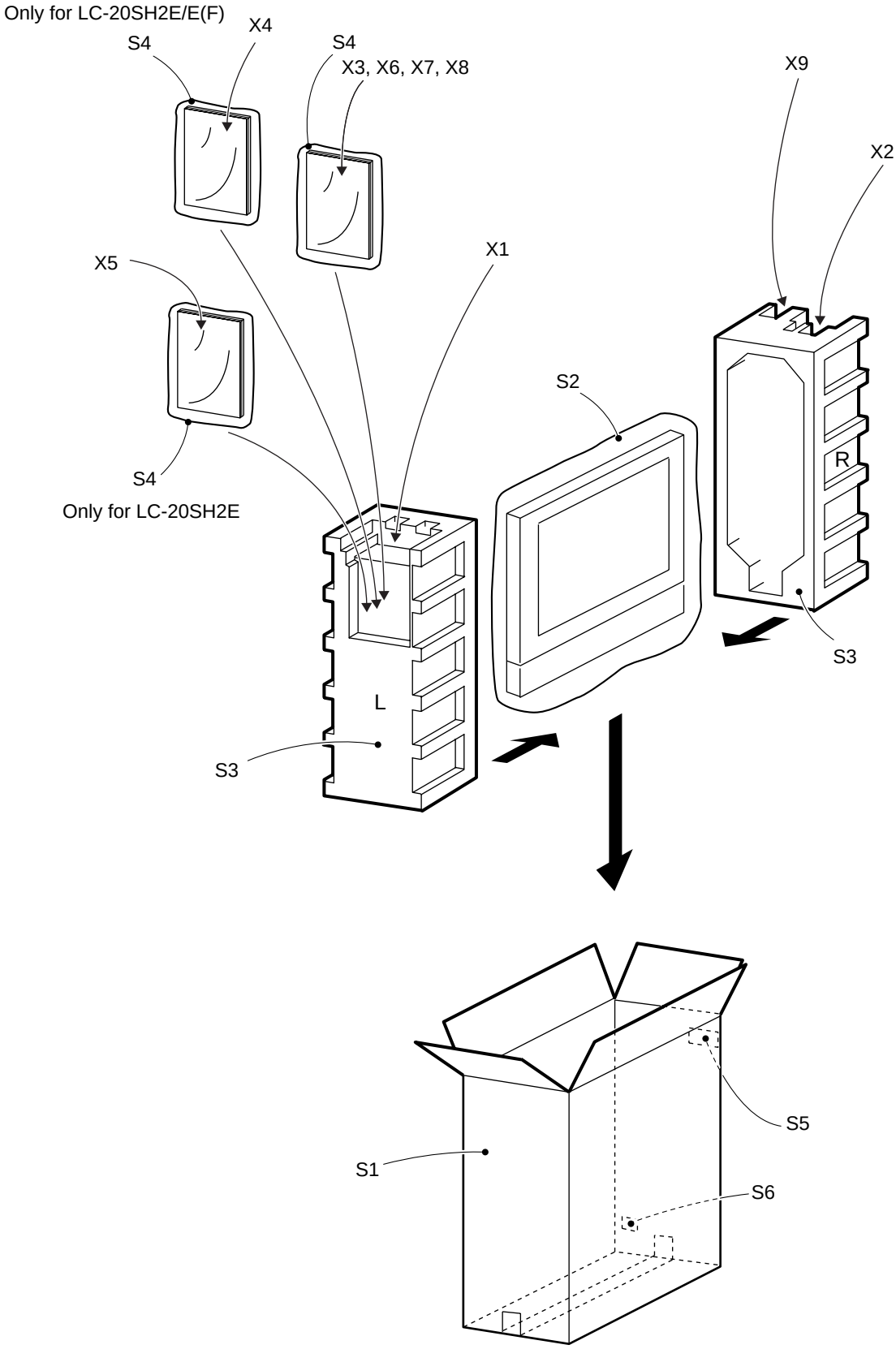
PACKING PARTS
(NOT REPLACEMENT ITEM)

Ref. No.	Part No.	★	Description	Code
S1	SPAKCB852WJZZ	–	Packing Case	—
S2	SPAKPA480WJZZ	–	Wrapping Paper	—
S3	SPAKXA730WJZZ	–	Buffer Material	—
S4	SSAKAA010WJZZ	–	Polyethylene Bag (E(I)/E(K)/E(R)x1, E(F)x2, Ex3)	—
S5	TLABKA002WJZZ	–	Carton Label, x1	—
S6	TLABSA029WJZZ	–	GOST Label (LC-20SH2E(R))	—

Supplied Accessories

AC cord	Wireless remote control	Operation manual	"AA" size batteries (×2)
X1  * Product shape may vary from country to country.	X2	X3 	X9 

PACKING OF THE SET



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TQ1852-S
Feb. 2005 Printed in Japan

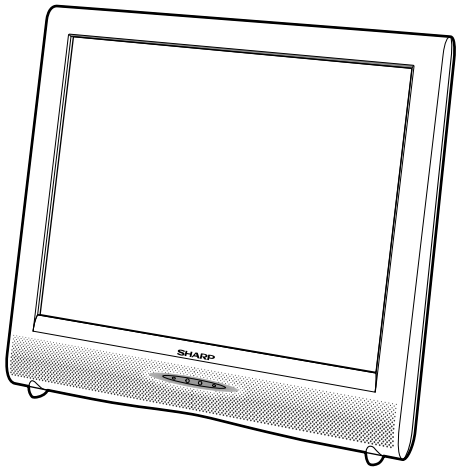
Design and Production Information
Design : Japan
Production : SEES

MI. KG

SHARP CORPORATION
AV Systems Group
Quality & Reliability Control Center
Yaita, Tochigi 329-2193, Japan

SHARP SERVICE MANUAL

S04B1LC20SH1E



LCD COLOUR TELEVISION

MODEL LC-20SH1E

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used.

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SHARP CORPORATION

IMPORTANT SERVICE SAFETY PRECAUTION

■ **Service work should be performed only by qualified service technicians who are thoroughly familiar with all safety checks and the servicing guidelines which follow:**

WARNING

1. For continued safety, no modification of any circuit should be attempted.
2. Disconnect AC power before servicing.

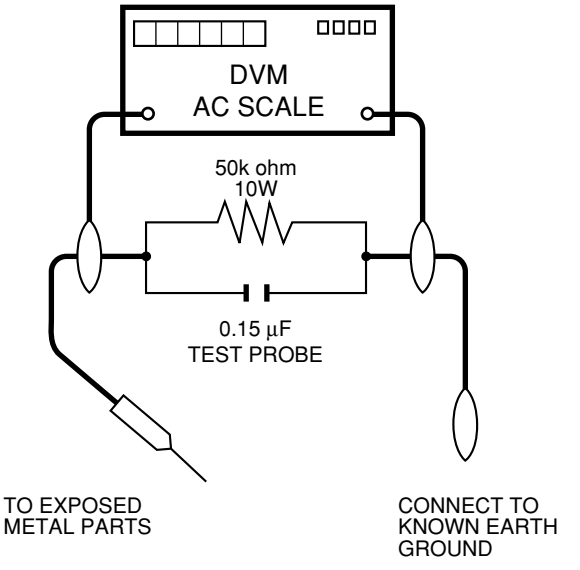
CAUTION: FOR CONTINUED PROTECTION AGAINST A RISK OF FIRE REPLACE ONLY WITH SAME TYPE F6700 (1.25A, 250V), F6701 (1.25A, 250V), F6702 (1.25A, 250V), F6703 (1.25A, 250V) F6704 (1.25A, 250V) AND F7701 (3.15A, 250V) FUSE.

BEFORE RETURNING THE RECEIVER (Fire & Shock Hazard)

Before returning the receiver to the user, perform the following safety checks:

1. Inspect all lead dress to make certain that leads are not pinched, and check that hardware is not lodged between the chassis and other metal parts in the receiver.
2. Inspect all protective devices such as non-metallic control knobs, insulation materials, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacitor networks, mechanical insulators, etc.
3. To be sure that no shock hazard exists, check for leakage current in the following manner.

- Plug the AC cord directly into a 220~240 volt AC outlet.
- Using two clip leads, connect a 50k ohm, 10 watt resistor paralleled by a 0.15µF capacitor in series with all exposed metal cabinet parts and a known earth ground, such as electrical conduit or electrical ground connected to an earth ground.
- Use an AC voltmeter having with 5000 ohm per volt, or higher, sensitivity or measure the AC voltage drop across the resistor.
- Connect the resistor connection to all exposed metal parts having a return to the chassis (antenna, metal cabinet, screw heads, knobs and control shafts, escutcheon, etc.) and measure the AC voltage drop across the resistor.
  All checks must be repeated with the AC cord plug connection reversed. (If necessary, a nonpolarized adaptor plug must be used only for the purpose of completing these checks.)
  Any reading of 0.75V peak (this corresponds to 0.5 mA. peak AC.) or more is excessive and indicates a potential shock hazard which must be corrected before returning the monitor to the owner.



SAFETY NOTICE

Many electrical and mechanical parts in LCD television have special safety-related characteristics.
These characteristics are often not evident from visual inspection, nor can protection afforded by them be necessarily increased by using replacement components rated for higher voltage, wattage, etc.
Replacement parts which have these special safety characteristics are identified in this manual; electrical components having such features are identified by " ⚠ " and shaded areas in the ***Replacement Parts Lists and Schematic Diagrams.***
For continued protection, replacement parts must be identical to those used in the original circuit.
The use of a substitute replacement parts which do not have the same safety characteristics as the factory recommended replacement parts shown in this service manual, may create shock, fire or other hazards.

Precautions for using lead-free solder

1 Employing lead-free solder

"MAIN PWB" of this model employs lead-free solder. The LF symbol indicates lead-free solder, and is attached on the PWBs and service manuals. The alphabetical character following LF shows the type of lead-free solder.

Example:

Indicates lead-free solder of tin, silver and copper.

2 Using lead-free wire solder

When fixing the PWB soldered with the lead-free solder, apply lead-free wire solder. Repairing with conventional lead wire solder may cause damage or accident due to cracks.

As the melting point of lead-free solder (Sn-Ag-Cu) is higher than the lead wire solder by 40°C, we recommend you to use a dedicated soldering bit, if you are not familiar with how to obtain lead-free wire solder or soldering bit, contact our service station or service branch in your area.

3 Soldering

As the melting point of lead-free solder (Sn-Ag-Cu) is about 220°C which is higher than the conventional lead solder by 40°C, and as it has poor solder wettability, you may be apt to keep the soldering bit in contact with the PWB for extended period of time. However, Since the land may be peeled off or the maximum heat-resistance temperature of parts may be exceeded, remove the bit from the PWB as soon as you confirm the steady soldering condition.

Lead-free solder contains more tin, and the end of the soldering bit may be easily corroded. Make sure to turn on and off the power of the bit as required.

If a different type of solder stays on the tip of the soldering bit, it is alloyed with lead-free solder. Clean the bit after every use of it.

When the tip of the soldering bit is blackened during use, file it with steel wool or fine sandpaper.

Be careful when replacing parts with polarity indication on the PWB silk.

Lead-free wire solder for servicing

Part No.	★	Description		Code
ZHNDAi123250E	J	ϕ0.3mm	250g(1roll)	BL
ZHNDAi126500E	J	ϕ0.6mm	500g(1roll)	BK
ZHNDAi12801KE	J	ϕ1.0mm	1kg(1roll)	BM

Precautions on removing the Sub PWB

- **CAUTION**

  Before taking out and servicing the Sub unit, be sure to discharge the C7703 electrolytic capacitor. Otherwise you may get an electric shock by the capacitor's charging voltage.

SPECIFICATIONS

Items \ Model		LC-20SH1E
LCD panel		20" Advanced Super View& BLACK TFT LCD
Number of dots		921,600 dots
Video colour system		PAL/SECAM/NTSC
TV	TV-Standard (CCIR)	B/G, I, D/K, L/L'
	TV-Tuning System	Auto preset 200 ch.
	STEREO/BILINGUAL	NICAM, A2 stereo
	AUTO PRESET	YES
	CATV	~Hyper Band
Brightness		430 cd/m^2
Viewing angles		H: 170° V: 170°
Audio amplifier		2.1 W × 2
Speakers		11 cm × 4 cm 2 pcs.
Terminals	EXT1	21-pin Euro-SCART
	EXT2	S-VIDEO, VIDEO, AUDIO
	OUT	AUDIO
	Antenna	DIN
	Headphones	3.5 mm ø jack (side)
OSD language		English/Spanish/German/French/Italian/Swedish/Dutch/Russian/Portuguese/ Turkish/Greek/Finnish/Polish
Power requirement		AC 220 V–240 V, 50/60 Hz
Power consumption		74 W (1.0 W Standby) AC 220 V–240 V
Weight (approx.)		6.3 kg, w/o accessories

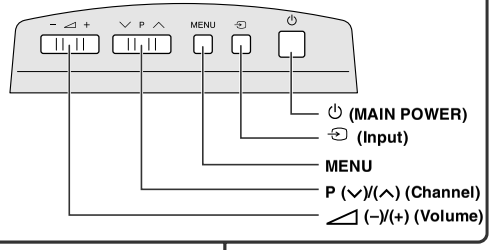
■ As a part of policy of continuous improvement, SHARP reserves the right to make design and specification changes for product improvement without prior notice. The performance specification figures indicated are nominal values of production units. There may be some deviations from these values in individual units.

Part Names of the Main Unit

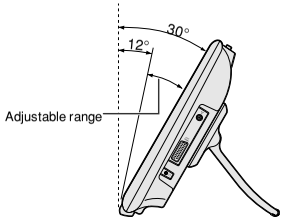
The examples used throughout this manual are based on the LC-20SH1E model.

Controls

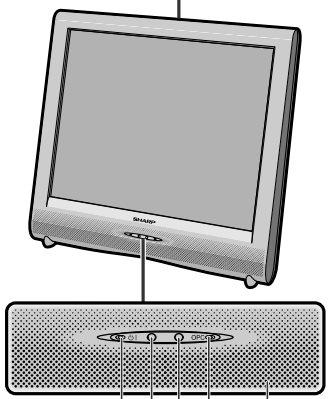
Upper control panel



■ How to adjust the angle



The screen angle can be tilted backwards between 12 and 30 degrees. (It cannot be set to vertical.) When changing the angle, make sure to hold the stand and adjust the screen to the best viewable angle.



Speaker

OPC (Optical Picture Control) indicator
The OPC indicator lights up green when the "Backlight" is set to "Auto (OPC)".

Remote sensor

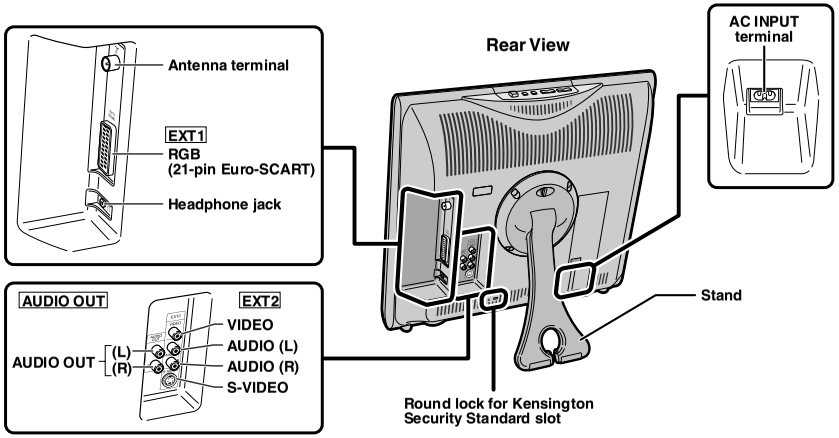
OPC sensor

STANDBY/ON indicator
STANDBY/ON indicator lights up green when the power is on, and red when in the standby mode (the indicator will not light when the main power is off).

NOTE

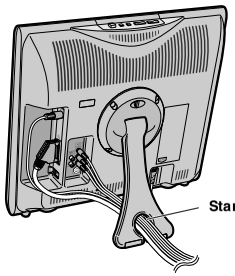
- **(Input)**, **P (∨)/(∧)(Channel)**, **(–)/(+) (Volume)** and **MENU** on the control panel of the main unit have the same functions as the same buttons on the remote control. Fundamentally, this operation manual provides a description based on operation using the remote control.

Terminals



How to Fix the Cables

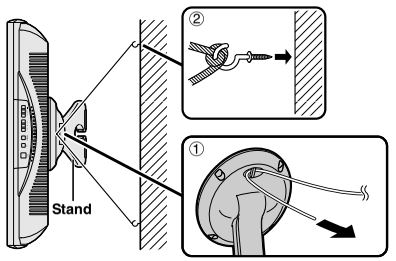
Pull the cables connected to each terminal. Insert the cables into the stand hole and fix the cables.



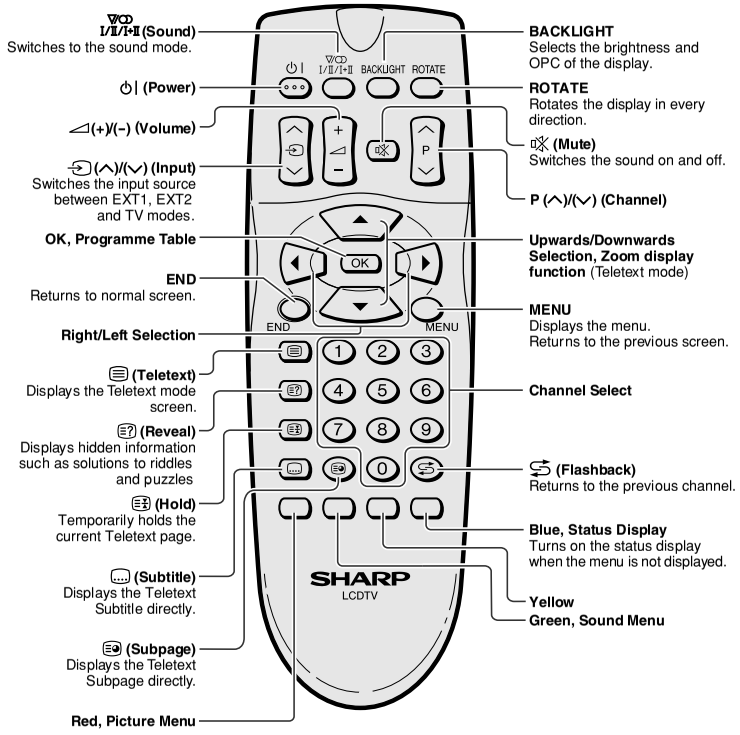
How to Prevent the LCD TV Set from Falling Over

To prevent the LCD TV set from falling over in case of earthquakes and so on, strap it onto the wall by threading one end of the string through the loop of the stand (①) and fastening the LCD TV set with the string attached to the hook on the wall or the post, etc. (②).
(An example of strapping the LCD TV set onto the wall is shown on the right.)

- The string and hook are commercially available.



Part Names of the Remote Control

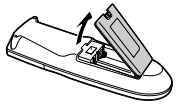


Preparation

Installing Batteries in the Remote Control

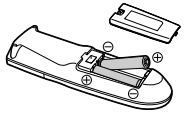
Before using the LCD TV set for the first time, install the two "AA" size batteries (supplied) in the remote control. When the batteries become depleted and the remote control fails to operate, replace the batteries with new "AA" size batteries.

1 Open the battery cover.



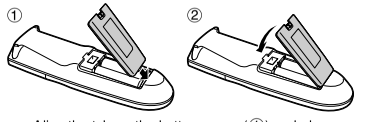
- Detach the cover while pressing the (▼) part.

2 Insert two "AA" size batteries.



- Place batteries with their terminals corresponding to the (+) and (–) indications in the battery compartment.

3 Close the battery cover.



- Align the tab on the battery cover (①) and place it while pressing the tab (②) to close it.

⚠ Caution!

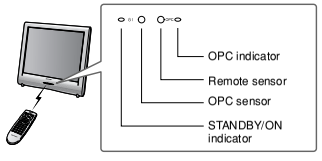
Precautions regarding batteries

Improper use of batteries can result in a leakage of chemicals and/or explosion. Be sure to follow the instructions below.

- Place batteries with their terminals corresponding to the (+) and (–) indications.
- Different types of batteries have different characteristics. Do not mix batteries of different types.
- Do not mix old and new batteries. Mixing old and new batteries can shorten the life of new batteries and/or cause old batteries to leak chemicals.
- Remove batteries as soon as they are depleted. Chemicals that leak from batteries can cause a rash. If chemical leakage is found, wipe it off with a cloth.
- The batteries supplied with the LCD TV set may have a shorter operating time due to storage conditions.
- If the remote control is not to be used for an extended period of time, remove the batteries from the remote control.

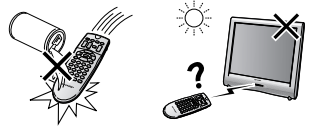
Using the Remote Control

Use the remote control by pointing it towards the remote sensor window of the main unit. Objects between the remote control and sensor window may prevent proper operation.



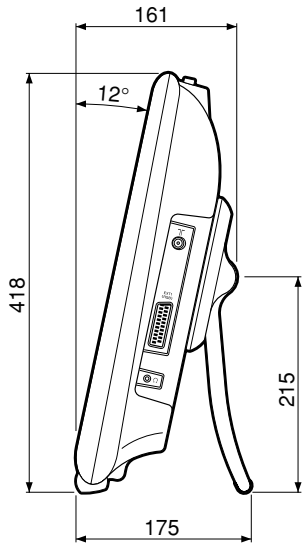
Cautions regarding use of the remote control

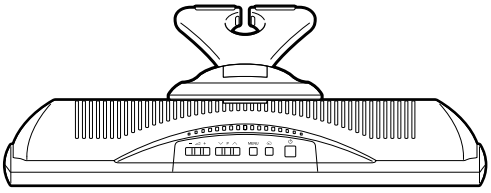
- Do not apply shock to the remote control. In addition, do not expose the remote control to liquids, and do not place it in an area with high humidity.
- Do not install or place the remote control under direct sunlight. The heat may cause deformation of the unit.
- The remote control may not work properly if the remote sensor window is under direct sunlight or strong lighting. In such a case, change the angle of the lighting or main unit, or operate the remote control closer to the remote sensor window.

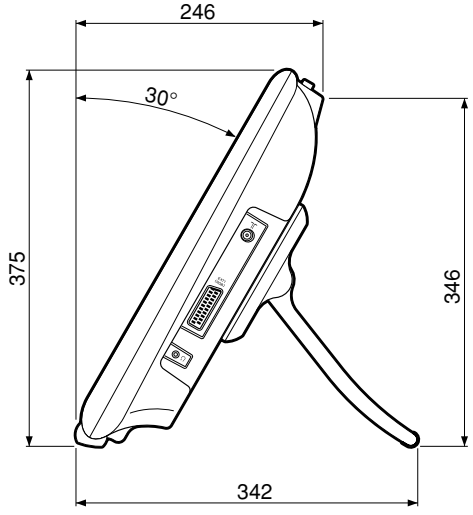


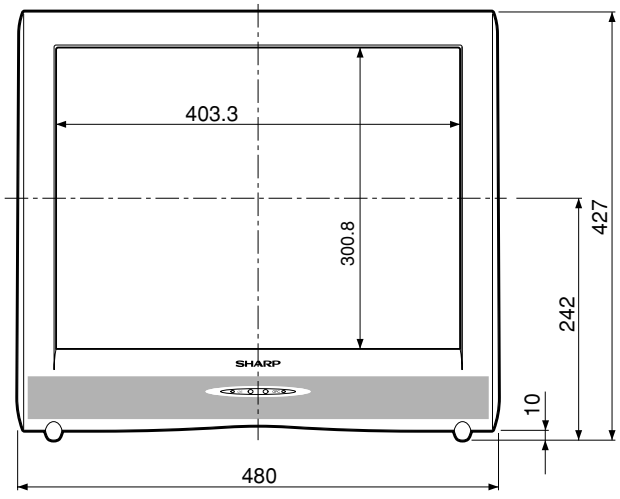
DIMENSIONS

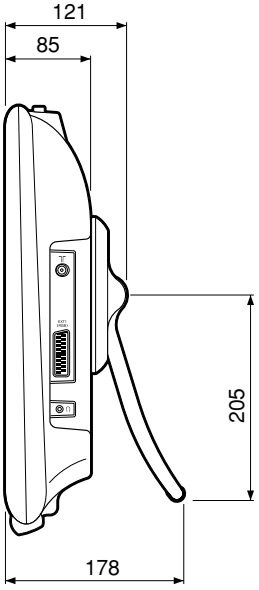
Unit: mm

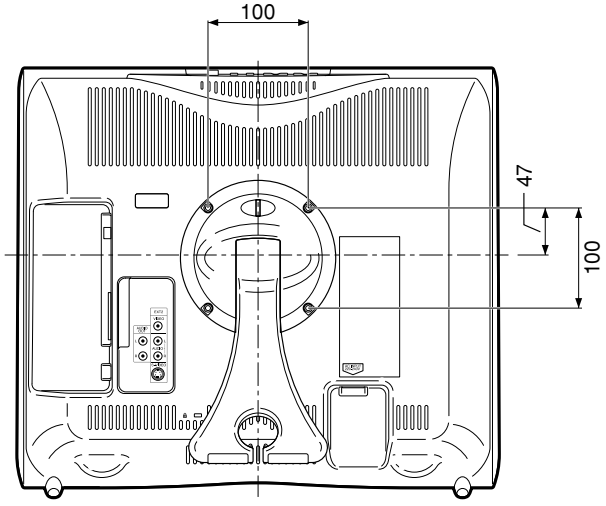






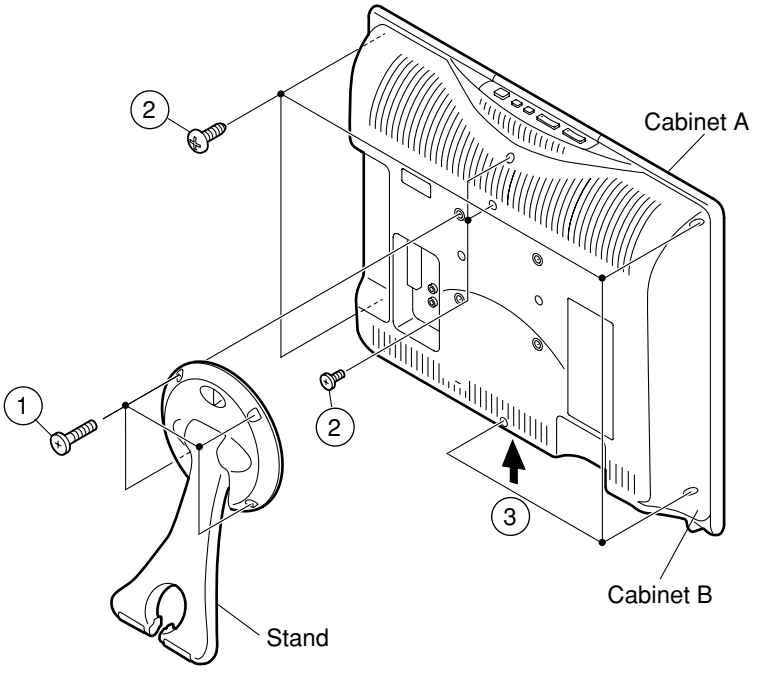


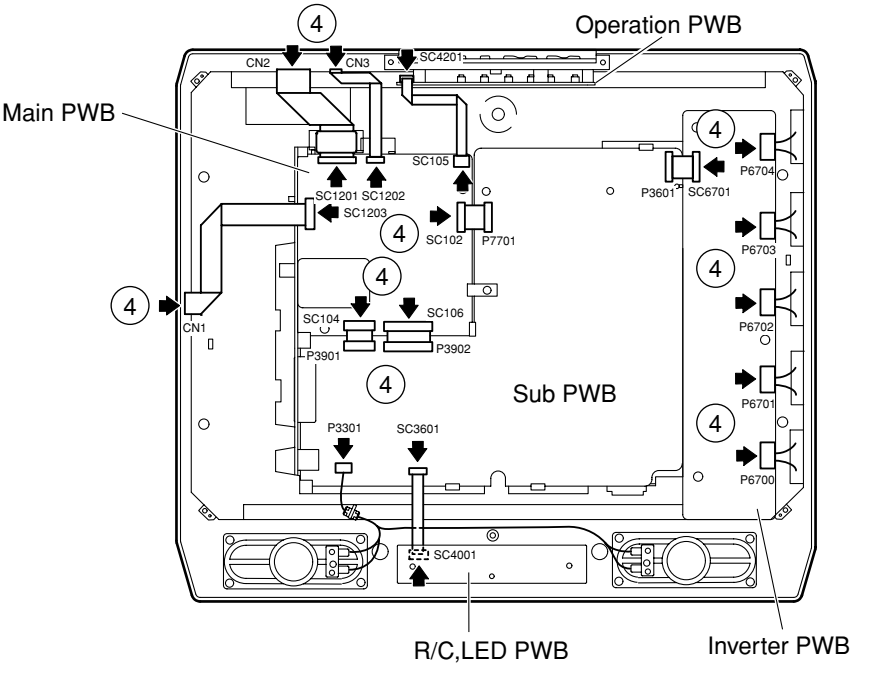




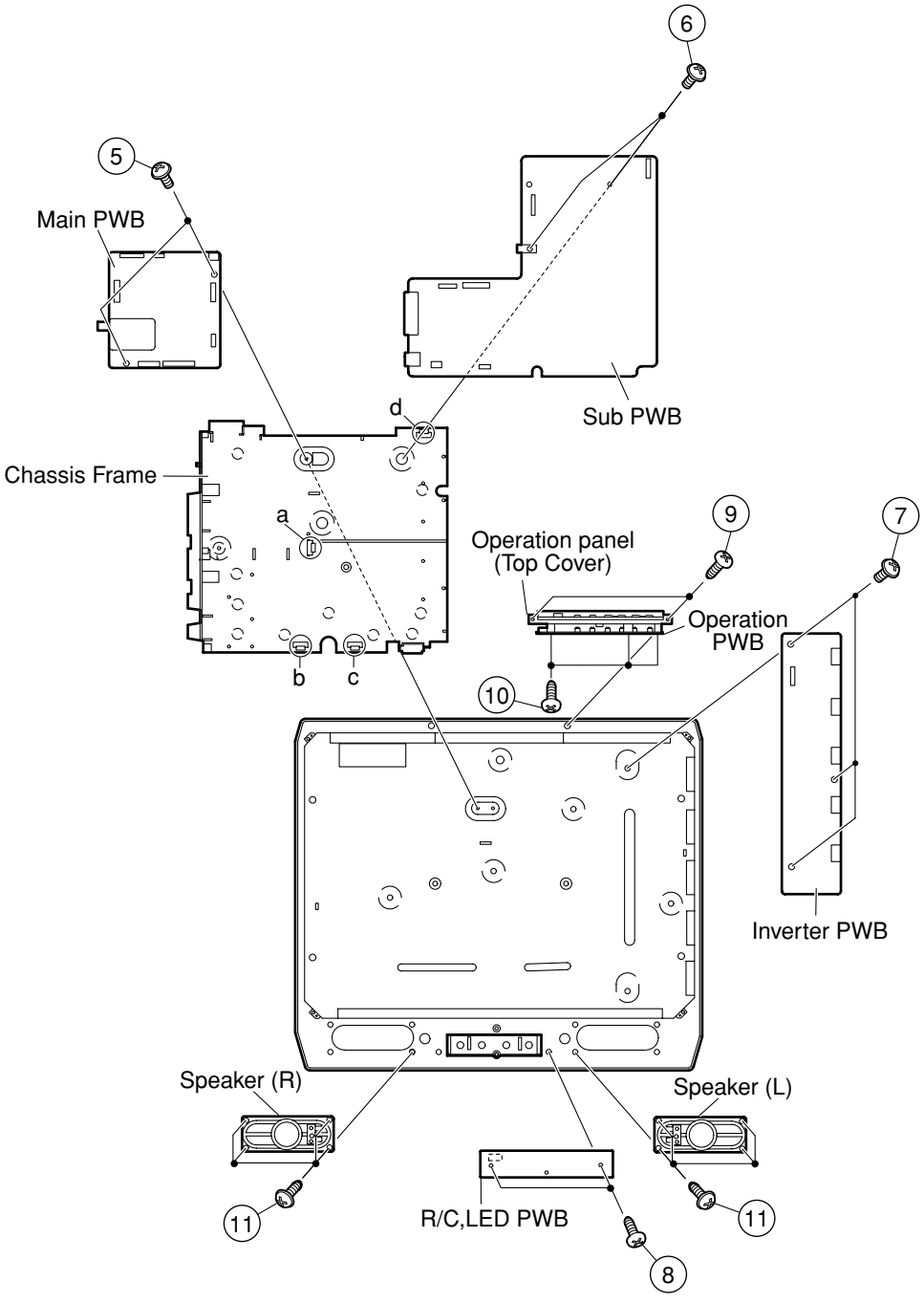
REMOVING OF MAJOR PARTS

1. Remove the stand fixing screws (4 pcs.).
2. Remove the cabinet B fixing screws (7 pcs.).
3. Remove the cabinet B after opening from the direction of an arrow.
4. Detach the connector from each PWB.



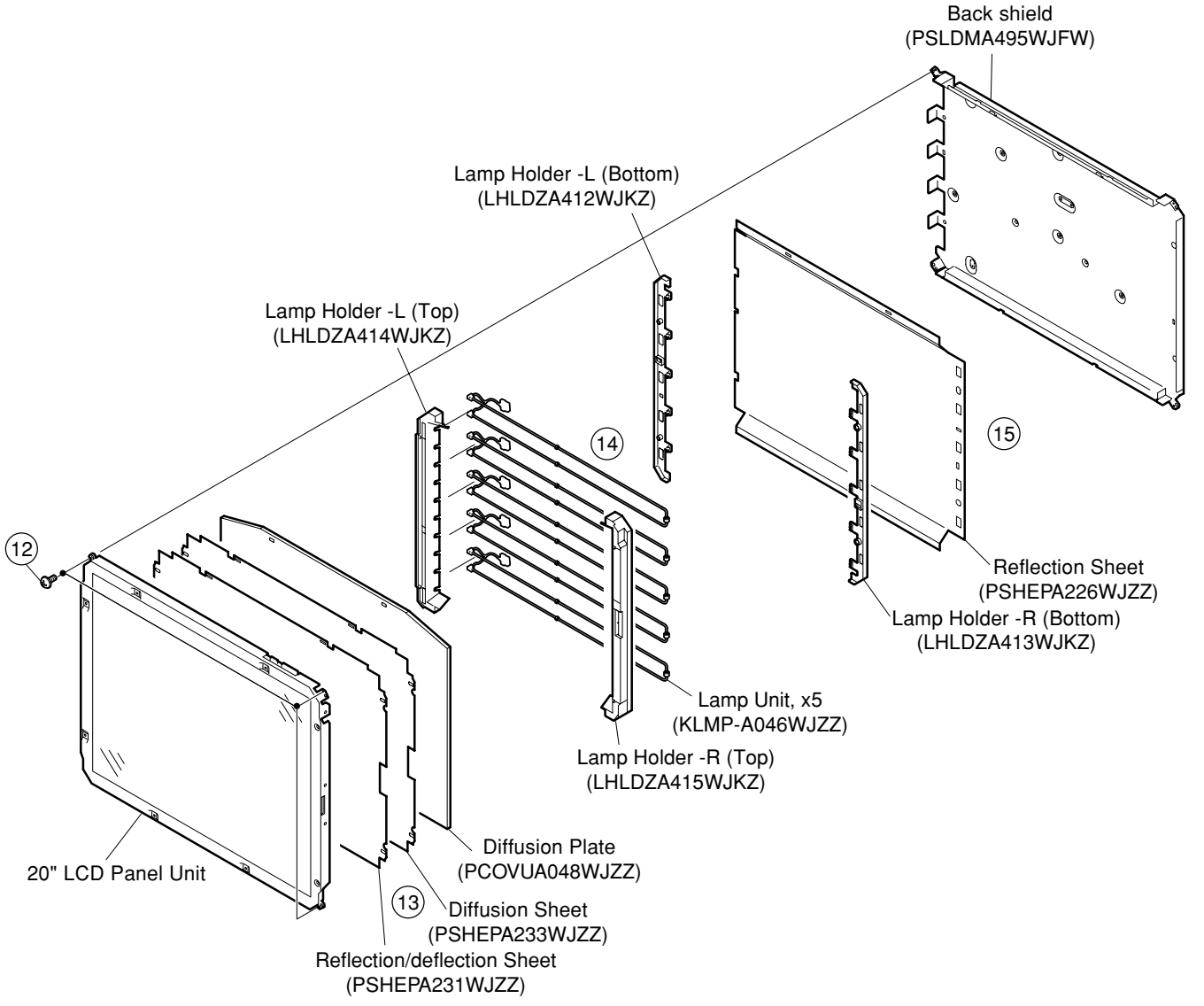


5. Remove the 2 lock screws from the main PWB and undo the hooks a. Detach the chassis frame, together with its terminals, from the main PWB.
6. Remove the 2 lock screws from the sub PWB and undo the hooks b, c and d. Detach the chassis frame together with its terminals, from the sub PWB.
7. Remove the 3 lock screws from the inverter PWB and take out the inverter PWB.
8. Remove the 2 lock screws from the R/C, LED PWB and take out the R/C, LED PWB.
9. Remove the 2 lock screws from the operation panel (top cover), and detach the operation panel (top cover).
10. Remove the 3 lock screws from the operation PWB, and detach the operation PWB.
11. Remove the 4 lock screws each from the right and left speakers and take out both the speakers.

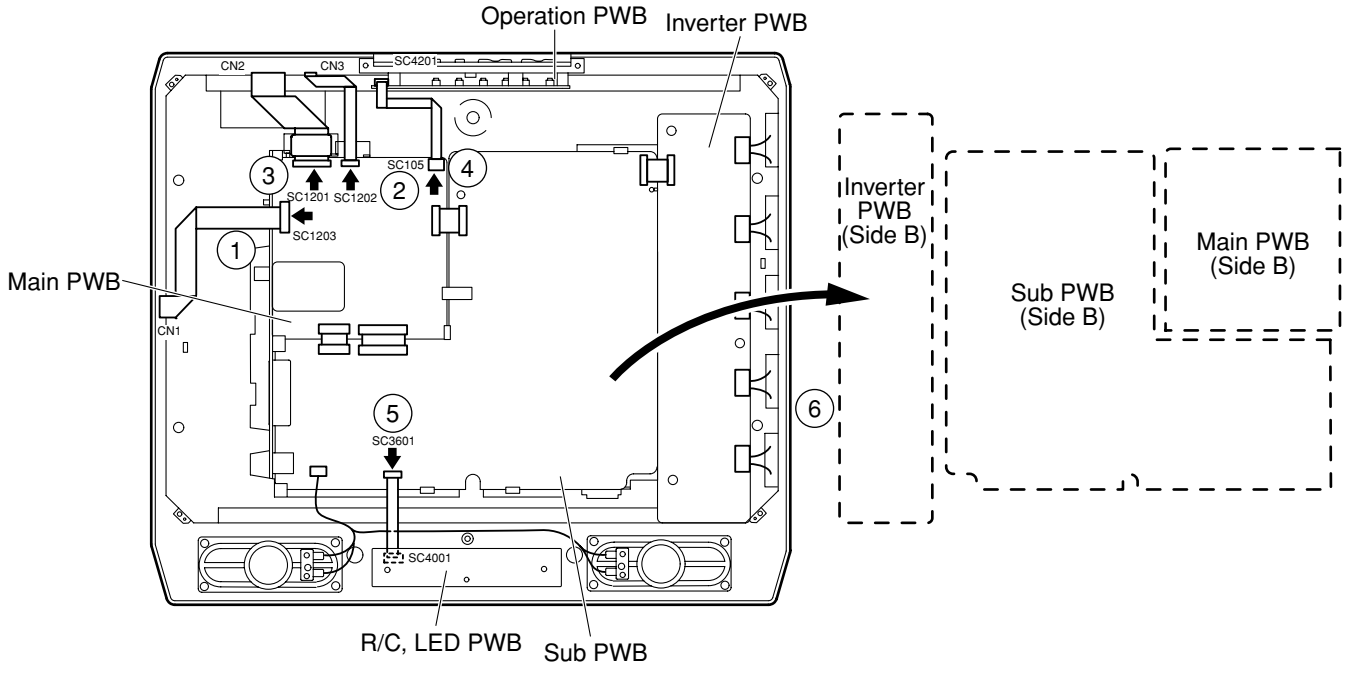


- Precautions in handling the LCD panels
  1. Work in a clean room (with humidities below 50%).
  2. Be sure to wear an anti-static armband.
  3. Handle the panels on an electro-conductive mat.
  4. Be careful not to fall, shake and shock the panels.

12. Remove the 3 lock screws from the LCD panel and detach the LCD panel.
13. Remove the reflection/deflection sheet, diffusion sheet and diffusion plate.
14. Detach the lamp holders -R (top), -L (top) and -R (bottom), -L (bottom) from the lamp unit.
15. Detach the reflection sheet from the back shield.



- **Precautions at the time of the side B(back) service of main, sub and Inverter unit.**
  1. Remove only SC1203 of the FFC for connection between Main unit (SC1203) and LCD panel, and connect the extended cable (QCNW-A553WJZZ) for service.
  2. Remove only SC1202 of the FFC for connection between Main unit (SC1202) and LCD panel, and connect the extended cable (QCNW-B556WJZZ) for service.
  3. Remove only SC1201 of the FFC for connection between Main unit (SC1201) and LCD panel, and connect the extended cable (QCNW-A555WJZZ) for service.
  4. Remove only SC105 of the FFC for connection between Main unit (SC105) and Operation unit (SC4201), and connect the extended cable (QCNW-D444WJQZ) for service.
  5. Remove only SC3601 of the FFC for connection between Sub unit (SC3601) and R/C, LED unit (SC4001), and connect the extended cable (QCNW-D445WJQZ) for service.
  6. Remove the PWB unit fixing screws (main unit : 2pcs, sub unit : 2pcs., inverter unit : 3pcs.)



Step	Part No.	Description
1	QCNW-A553WJZZ	Extension Cable 30-pin Main (SC1203)-LCD Panel
2	QCNW-A556WJZZ	Extension Cable 50-pin Main (SC1202)-LCD panel
3	QCNW-A555WJZZ	Extension Cable 20-pin Main (SC1201)-LCD panel
4	QCNW-D444WJQZ	Extension Cable 5-pin Operation (SC4201)-Main (SC105)
5	QCNW-D445WJQZ	Extension Cable 8-pin R/C, LED (SC4001)-Sub (SC3601)

ADJUSTING PROCEDURE OF EACH SECTION

The best adjustment is made before shipping. If any position deviation is found or after part replacement is performed, adjust as follows.

Preparation for adjustments

Use a stable AC power source.
LC-20SH1E AC Power : 230V

1. Adjusting procedure

Complete Set → Power ON → Enter Adjustment Process Mode (By Remote Control) → RF AGC adjustment → DCXO adjustment → Common Bias adjustment → White Balance adjustment

2. Entering the adjustment process mode

- After power on, press the adjustment process mode key on the service remote control.
- Switching on the TV set, holding pushed the "Input" and "Volume (–)" Key at once, the TV set enters in the "K" mode.
  In this condition, pushing "Volume (–)" and "P (∨)" Key, the adjust mode appears.

3. Key operation in the adjustment process mode

- Use the "UP" or "DOWN" cursor key to select the adjustment mode item.
- Use the "LEFT" or "RIGHT" cursor key to change the data.

4. Initialization

When the EEPROM (IC101) has been replaced or when the EEPROM has been initialized, readjust the each adjust the each adjustments.

4-1. When the EEPROM has been replaced:

1) Plug in the AC cord to an AC power outlet and turn on the power.
2) When the setting is finished, the LED turns from red to green. In about 15 seconds, the initialization is completed.

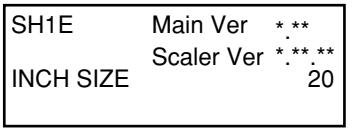
4-2. When initializing the EEPROM data and making readjustments:

1) Enter the Adjustment Process mode.
2) Select the INIT TV item and press the "RIGHT" cursor key to enable the item.
3) Unplug the power cable and plug it again in the AC power outlet. Turn on the power.
4) When the setting is finished, the LED turns from red to green. In about 5 seconds, the initialization is completed.

<Note>
When the INIT TV item has been enabled in the adjustment process, be sure to unplug the power cable and plug it in again. Then start adjustments. Otherwise the readjusted data cannot be put in memory.

4-3. Setting the screen size (inches)

1) Enter the Adjustment Process mode.
2) Check the model number.
3) Hold down the "LEFT" or "RIGHT" cursor key longer than 2 seconds, and select a screen size (LC-20SH1E).



5. Adjustment

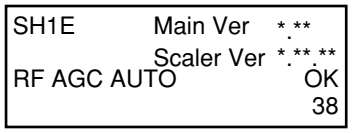
5-1. RF AGC adjustment

1) Feed the colour bar signal.

2) In Adjustment Mode, select the RF AGC AUTO ("OFF") and press the " RIGHT" cursor key to start the adjustment.

3) Automatic adjustment is complete when it display "OK" is displayed.

4) RF AGC data will be in the range of 0-63. If "NOK" is displayed, adjustment failed.



RF AGC Auto adjustment complete

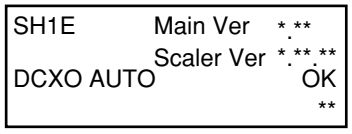
RF AGC data (Example)

5-2. DCXO adjustment

1) Feed the colour bar signal.

2) In Adjustment Mode, select the DCXO AUTO ("OFF") and press " RIGHT" cursor key to start the adjustment.

3) Automatic adjustment is complete when "OK" is displayed. If "NOK" is displayed, adjustment failed.



DCXO Auto adjustment complete

DCXO data

5-3. Common bias adjustment

1) Select the EXT-Video input and without signal.

2) In Adjustment Mode, select the COM BIAS and vary the data until the contrast becomes the sharpest. (Black looks most sinking.)

5-4. White balance adjustment

[A] White balance pre-adjustment

1) Feed the 100% white signal.

2) In Adjustment Mode, select the AWBSD ("OFF") and press the " RIGHT" cursor key to start the adjustment.

3) Automatic adjustment is complete when "OK" is displayed.

[B] White balance adjustment

Adjust "R CUTOFF2", "G CUTOFF2", "B CUTOFF2", "WB R GAIN", "WB G GAIN" and "WB B GAIN" in the adjustment processing to obtain the same colour as the standard set.

6. Factory setting

6-1. Make the factory setting using the adjustment remote control.

Model	Key Name	Remote Control Code				OSD Language Setting	
A3IK20SH1E	Shipment Setting 1	1000	0011	1111	110	German	(00001 FEh)
A3IK20SH1K	Shipment Setting 2	1000	0000	1010	110	English	(00002 A8h)
A3IK20SH1R	Shipment Setting 3	1000	0110	1011	110	Russian	(00003 EBh)
A3IK20SH1F	Shipment Setting 4	1000	0100	1011	110	French	(00004 E9h)
A3IK20SH1I	Shipment Setting 6	1000	0000	1011	110	Italian	(00005 E8h)

6-2. Different factory settings.

Model	Language	Country	Color System	Sound System
A3IK20SH1E	German	Germany	PAL	B/G
A3IK20SH1K	English	UK	PAL	I
A3IK20SH1R	Russian	Russia	SECAM	D/K
A3IK20SH1F	French	France	SECAM	L/L'
A3IK20SH1I	Italian	Italy	PAL	B/G

7. Lamp error detection

7-1. Functional description

This LCD colour television has a function (lamp error detection) to be turned OFF automatically for safety when the lamp or lamp circuit is abnormal.

If the lamp or lamp circuit is abnormal, or some other errors happen, and the lamp error detection is executed, the followings occur.

① The main unit of television is turned OFF 5 seconds after it is turned ON. (The power LED on the front side of TV turns from green to red.)

② If the situation ① happens 5 times sequentially, television can not be turned ON. (The power LED remains red.)

7-2. Countermeasures

7-2-1. Check when turning OFF the lamp error detection

If the power has been turned off 5 times because of lamp error, hold down the unit's "INPUT" and "Volume (–)" kye simultaneously and turn on the unit's power switch. The TV set gets back on power in the "K" mode.

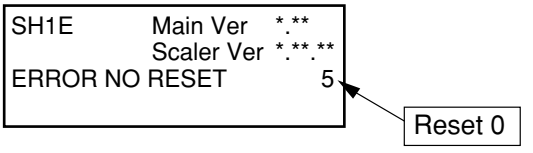
In this state, press the unit's "Volume (–)" and "P (∨)" key simultaneously. The Adjustment Process mode shows up.

This enables the operation check to detect errors in the lamp or lamp circuit.

Check whether "ERROR NO RESET" of the adjustment process is 1 or more. If it is 1 or more, it indicates the lamp error detection was executed.

7-2-2. Resetting of the lamp error count

After confirming that the lamp or lamp circuit is normal, reset the lamp error count. Select "ERROR NO RESET" of the adjustment process and set the number to 0 using the "LEFT" or "RIGHT" cursor key.



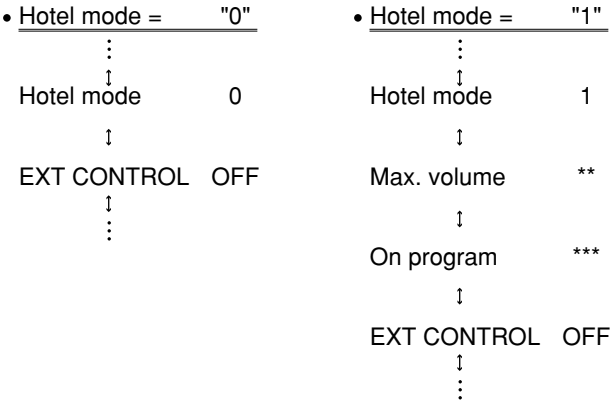
Afterwards, perform the operation check to confirm that the lamp error detection does not function.

8. Hotel mode

8-1. How to enter the Hotel mode.

1) Turn on the power and enter the Adjustment Process mode.
2) Using the "UP" or "DOWN" cursor key on the remote controller, select the Hotel mode.
3) Using the "RIGHT" cursor key on the remote controller, change the setting from "0" to "1". Now the Hotel mode shows up.

Adjustment Process menu



4) Using the "UP" or "DOWN" cursor key on the remote controller, select "Max. volume" and "On program". Make the setting with the "LEFT" or "RIGHT" cursor key.
5) Finally quit the Adjustment Process mode and turn off the power. The TV set comes on in the Hotel mode after the next switch-on.

8-2. Hotel mode settings

1) Max. volume (0-60)
   You can set the maximum volume at your desired level.
2) On program (0-199)
   You can select a desired channel when switching on the TV set.

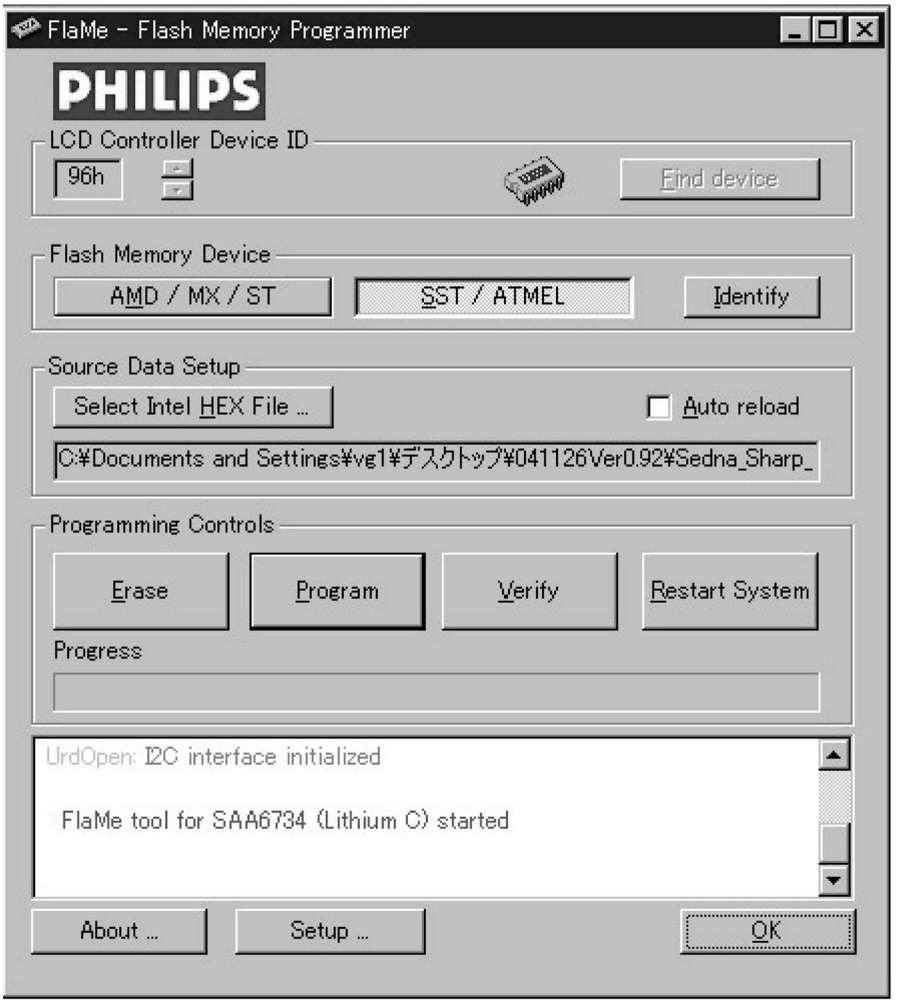
8-3. Canceling the Hotel mode

1) Turn on the power and enter the Adjustment Process mode.
2) Using the "UP" or "DOWN" cursor key, select the Hotel mode.
3) Using the "LEFT" cursor key, change the setting from "1" to "0".
4) Finally quit the Adjustment Process mode and turn off the power. The TV set comes on out of the Hotel mode after the next switch-on.

9. Software Loading

1) Upgrading the software or after replacement of IC151, IC501 or Main PWB, make sure to upload the processors with updated software.
2) Please use the dedicated Interface JIG (JIGINF-001) and supplied programs for upgrading the software.
3) This model employs two software;
   • SCALER microprocessor software
   • MAIN microprocessor software
   Please upload the SCALER microprocessor software first follow by MAIN microprocessor software.

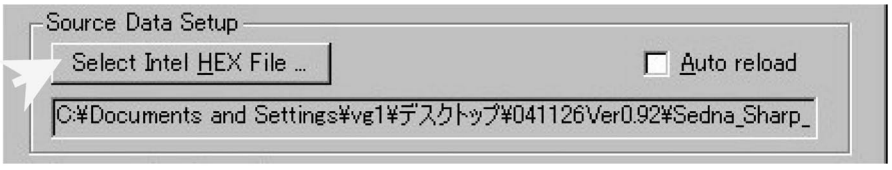
1. SCALER microprocessor
   1) Set Interface JIG switch to position "SCALER".
   2) Power ON the set and plug Interface JIG connector to P2002.
   3) Run the ISP_Tool.exe program.



4) First click [SST / ATMEL] and then follow by [Identify] to identify the flash memory.

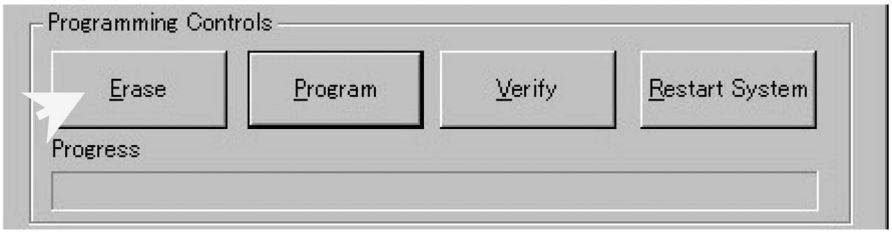
Confirm the item below in Comment Window.

5) Click [Select Intel HEX File …] to open the source files. The source file name are "Sedna_Sharp****.hex"

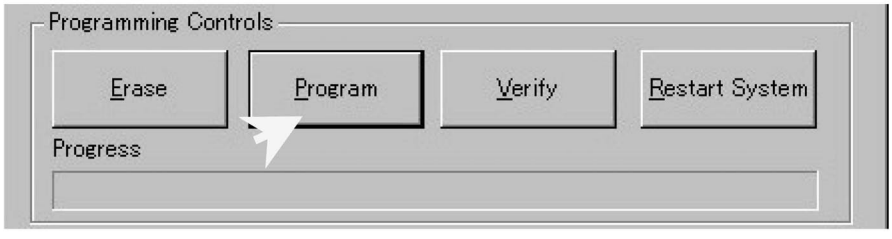


Confirm the source file is loaded correctly.

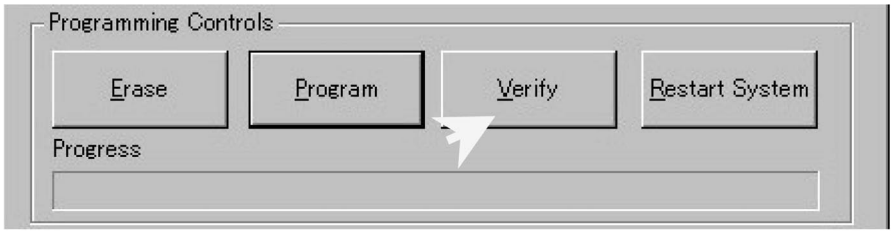
6) Next click the [Erase] to erase all the data in the flash memory. Confirm the erase process is complete without any error.



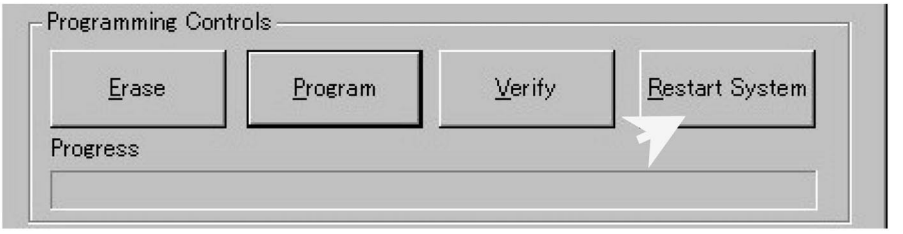
7) Then click [Program] to start uploading the source file into the flash memory. After uploading process is complete, confirm there are no error.



8) Click [Verify] to verify the uploaded data and confirm there are no error.



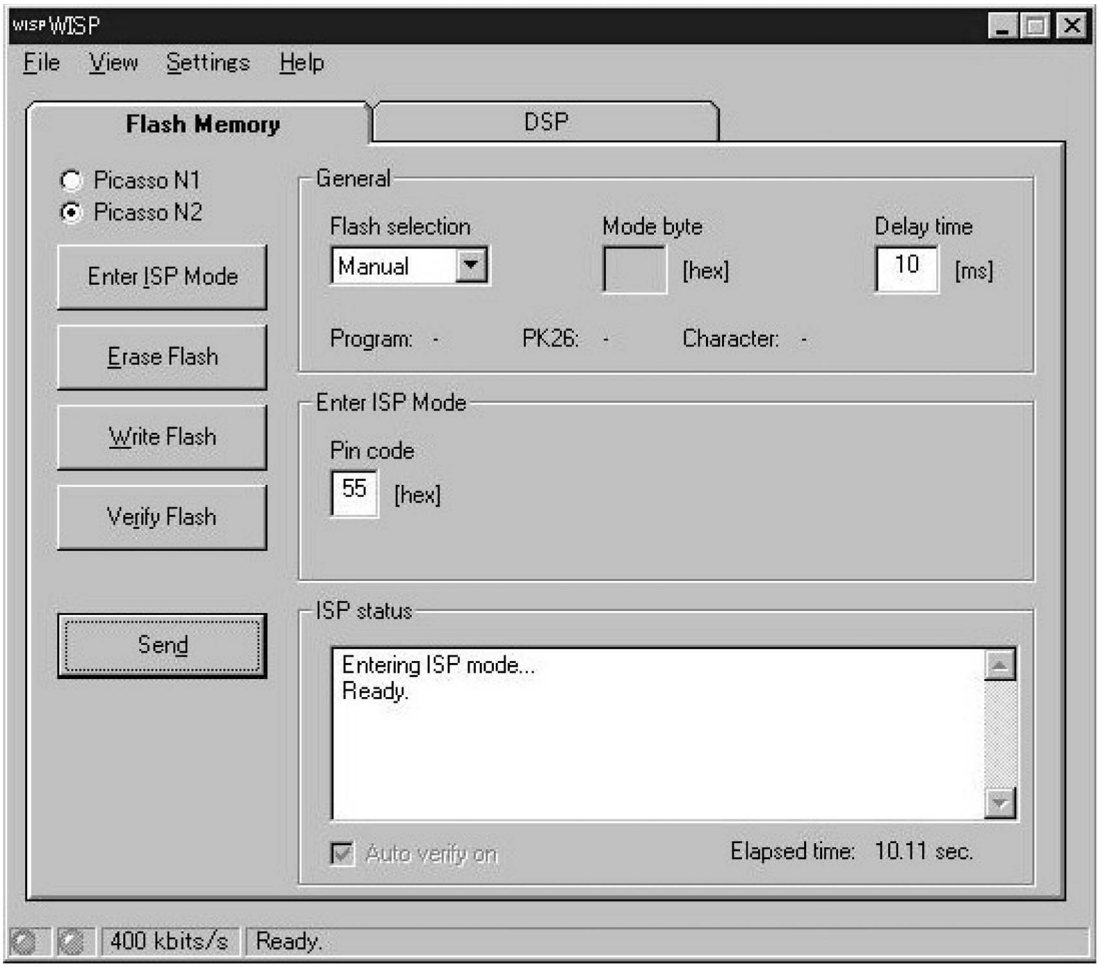
9) Finally click [Restart System] to initialize. Confirm "Reset done" in Comment Window.



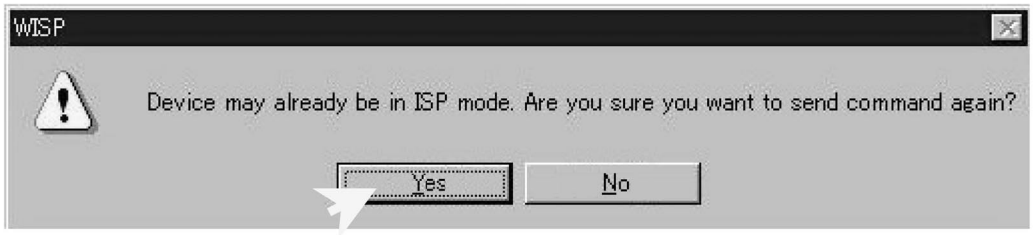
10) Power OFF the set by unplugging AC Cord, remove the JIG from the plug and wait for 1 minute before power ON again.

Notes: If any error occur during any process, power OFF the set and repeat the all the process again. If these still fail, please erase Main Software and repeat the whole process again. To erase Main software, please refer to MAIN microprocessor step No. 1) to 5) only.

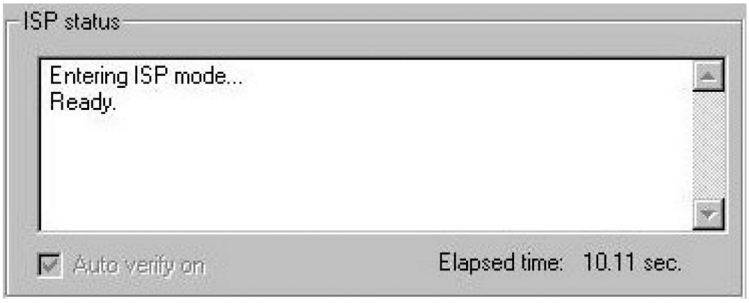
2. MAIN microprocessor
   1) Set JIG switch to position "LOC".
   2) Power ON the set and plug Interface JIG connector to P2002.
   3) Run the WISP.exe program.



4) First click [Enter ISP Mode] then click [Send]. If the following window appear, click [Yes]

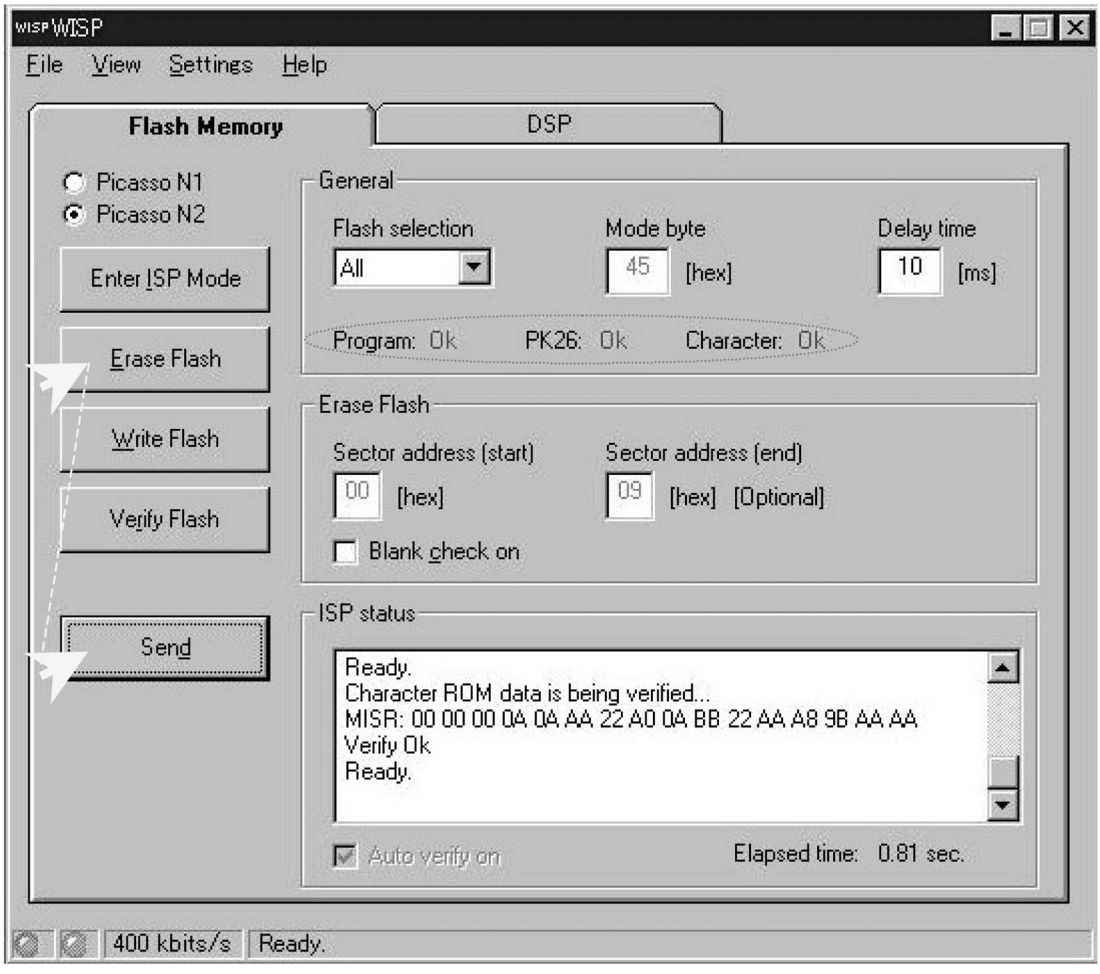


Confirm ISP status "Ready".



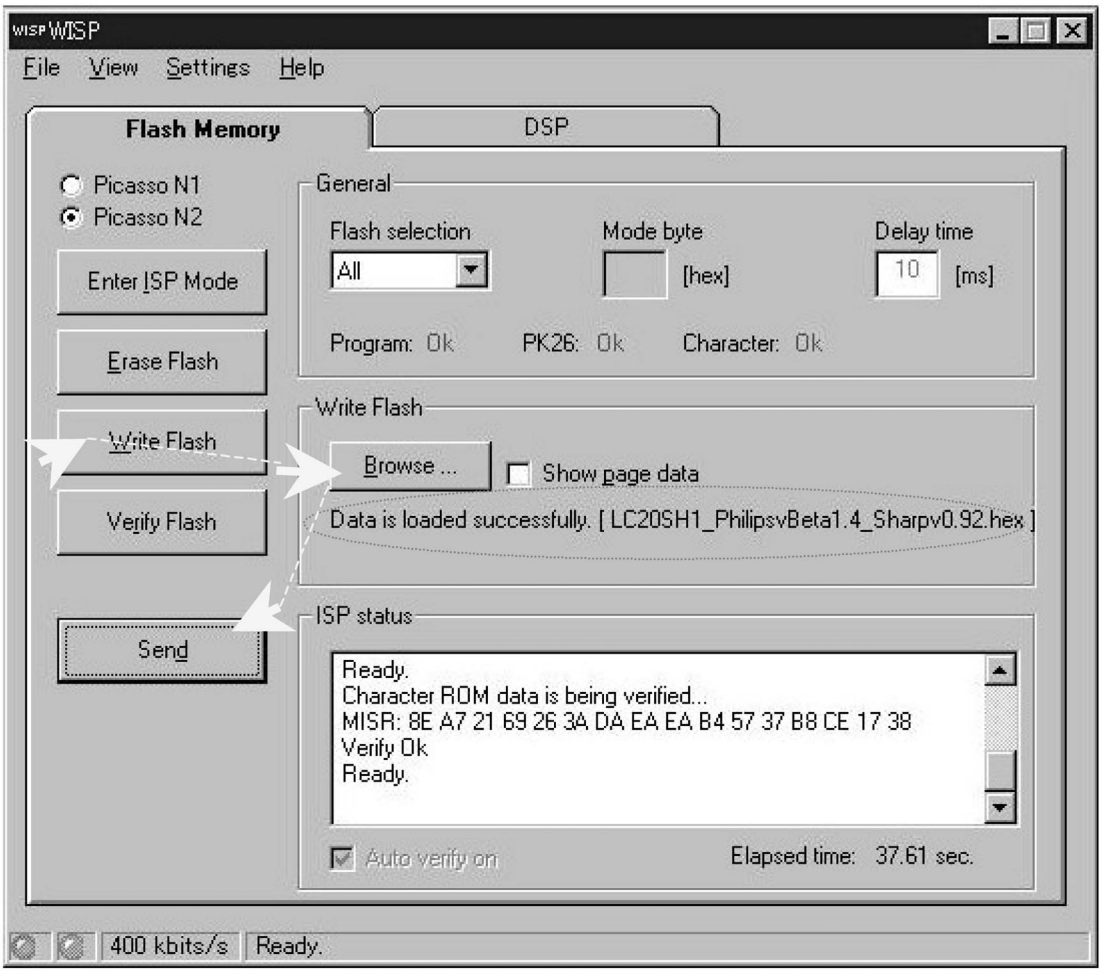
If "Entering ISP is not successful" occur, repeat step No. 4) again. If still fail, unplug the AC cord and repeat from step No. 2) again.

5) Then click [Erase Flash], follow by [Send]. Confirm the Program, PK26 & Character are all "OK" and ISP status is "Ready".



If "Failed" occur, unplug the AC cord and repeat the whole process again from beginning.

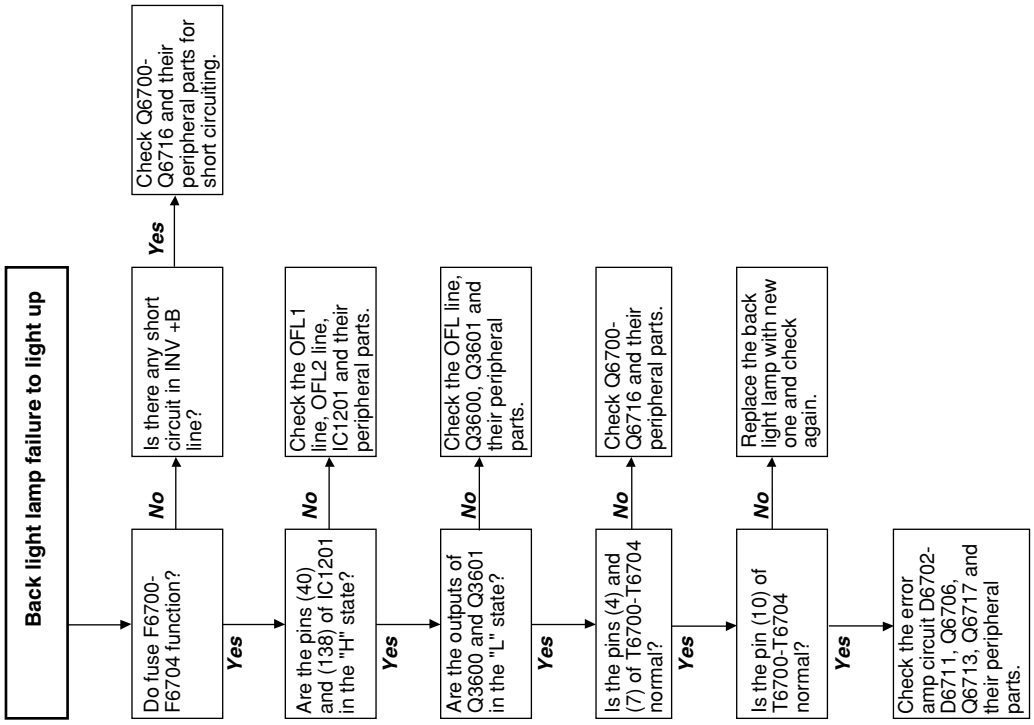
6) Next click [Write Flash] and load the source file by clicking [Browse]. The source file name are "LC20SH1_****.hex". Once the data is loaded successfully click [Send]. Confirm the Program, PK26 & Character are all "OK" and ISP status is "Ready".

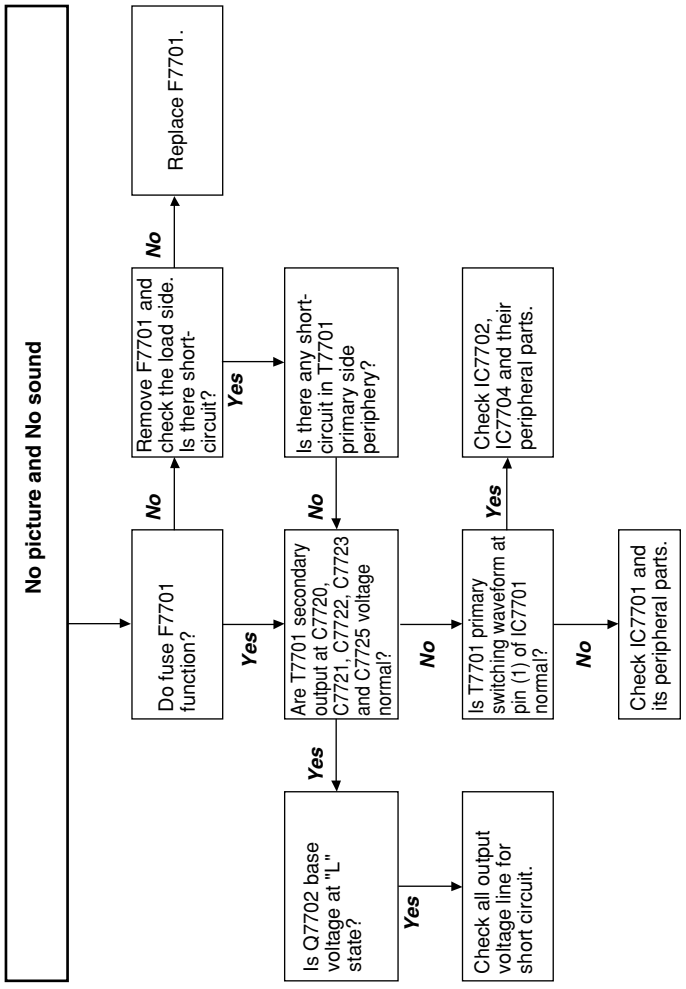


If "Failed" occur, unplug the AC cord and repeat the whole process again from beginning.

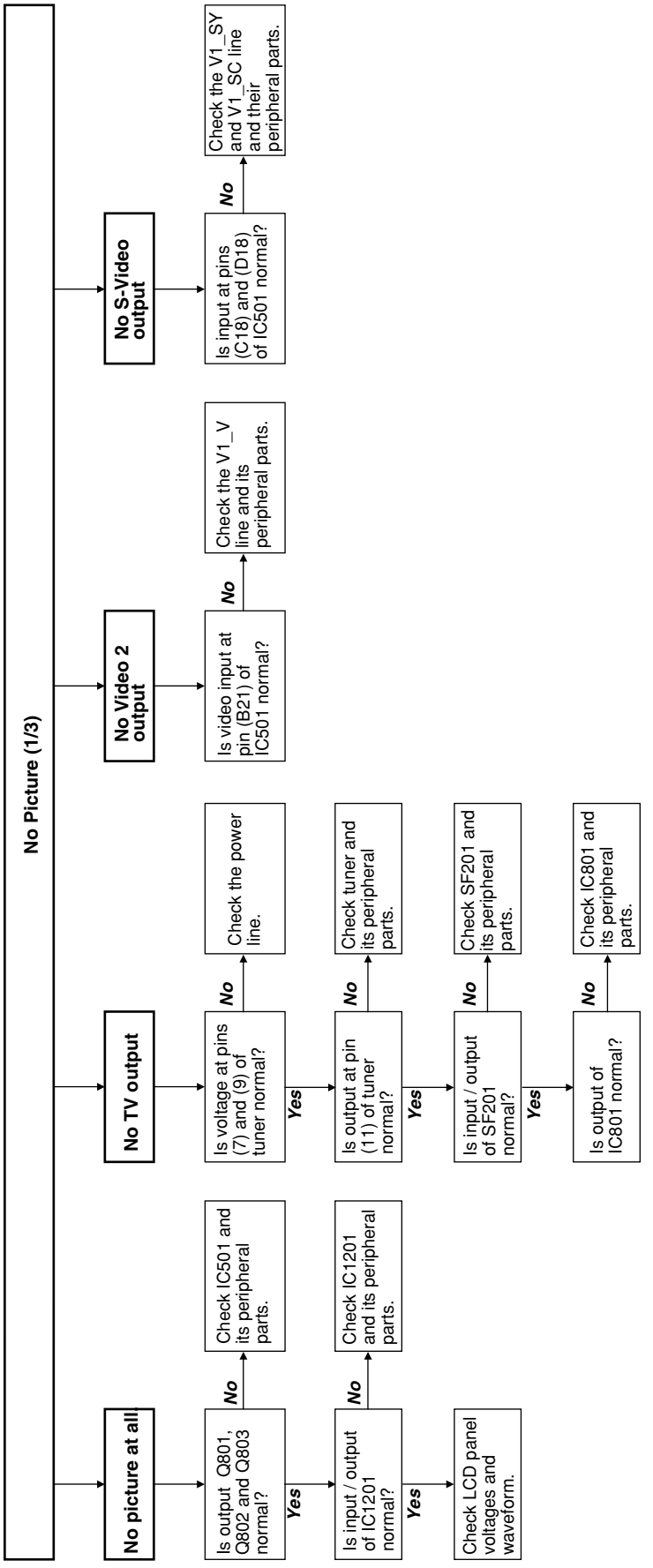
7) Finally click [Verify Flash] and [Send] to verify the flash memory. Confirm the Program, PK26 & Character are all "OK" and ISP status is "Ready". If "Failed" occur, unplug the AC cord and repeat the whole process again from beginning.
8) Power OFF the set and remove the JIG.

TROUBLE SHOOTING TABLE

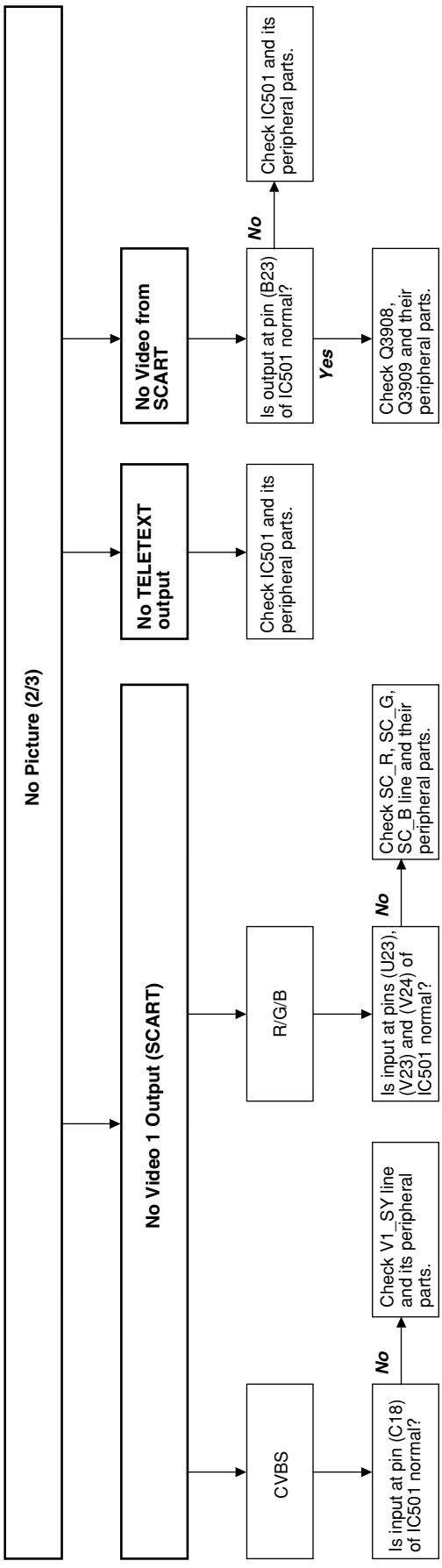

Back light lamp failure to light up
Do fuse F6700-F6704 function?
No
Is there any short circuit in INV +B line?
Yes
Check Q6700-Q6716 and their peripheral parts for short circuiting.
Yes
Are the pins (40) and (138) of IC1201 in the "H" state?
No
Check the OFL1 line, OFL2 line, IC1201 and their peripheral parts.
Yes
Are the outputs of Q3600 and Q3601 in the "L" state?
No
Check the OFL line, Q3600, Q3601 and their peripheral parts.
Yes
Is the pins (4) and (7) of T6700-T6704 normal?
No
Check Q6700-Q6716 and their peripheral parts.
Yes
Is the pin (10) of T6700-T6704 normal?
No
Replace the back light lamp with new one and check again.
Yes
Check the error amp circuit D6702-D6711, Q6706, Q6713, Q6717 and their peripheral parts.

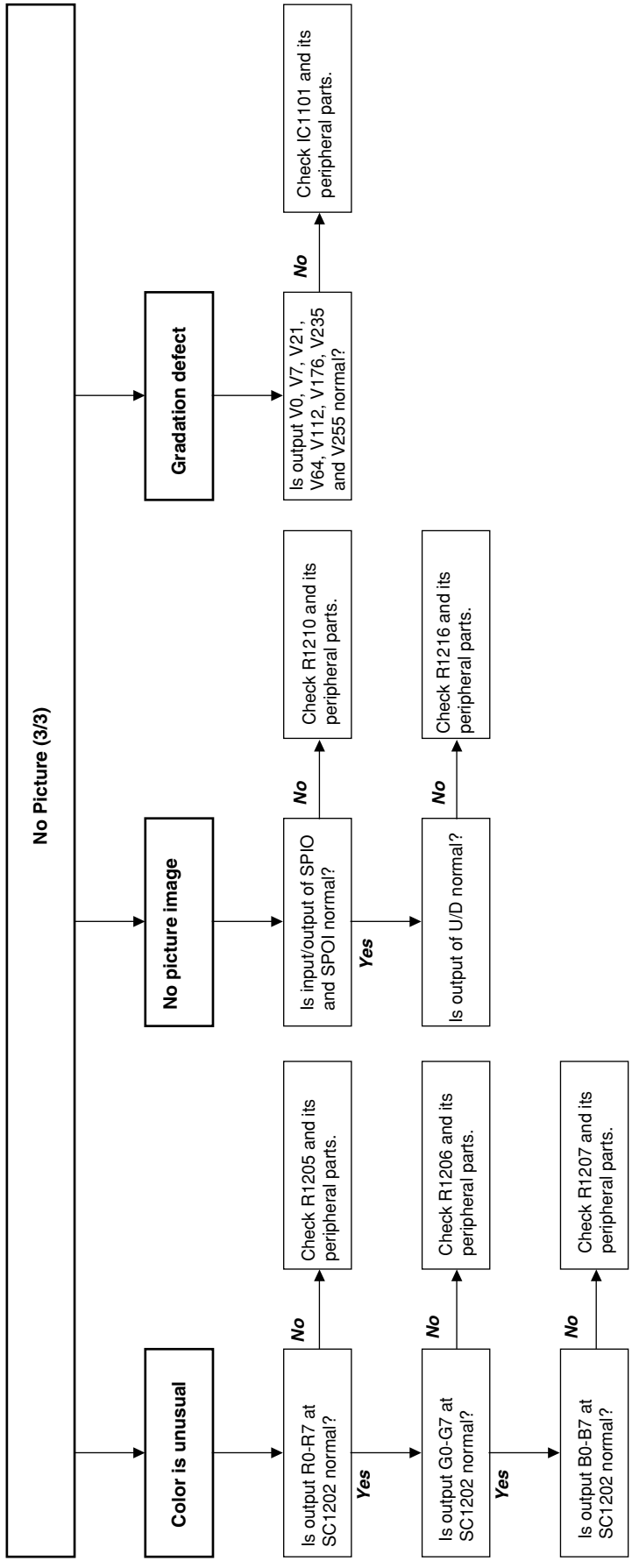

No picture and No sound
Do fuse F7701 function?
No
Remove F7701 and check the load side. Is there short-circuit?
No
Replace F7701.
Yes
Is there any short-circuit in T7701 primary side periphery?
Yes
Are T7701 secondary output at C7720, C7721, C7722, C7723 and C7725 voltage normal?
No
Is T7701 primary switching waveform at pin (1) of IC7701 normal?
Yes
Check IC7702, IC7704 and their peripheral parts.
No
Check IC7701 and its peripheral parts.
Yes
Is Q7702 base voltage at "L" state?
Yes
Check all output voltage line for short circuit.

TROUBLE SHOOTING TABLE (Continued)

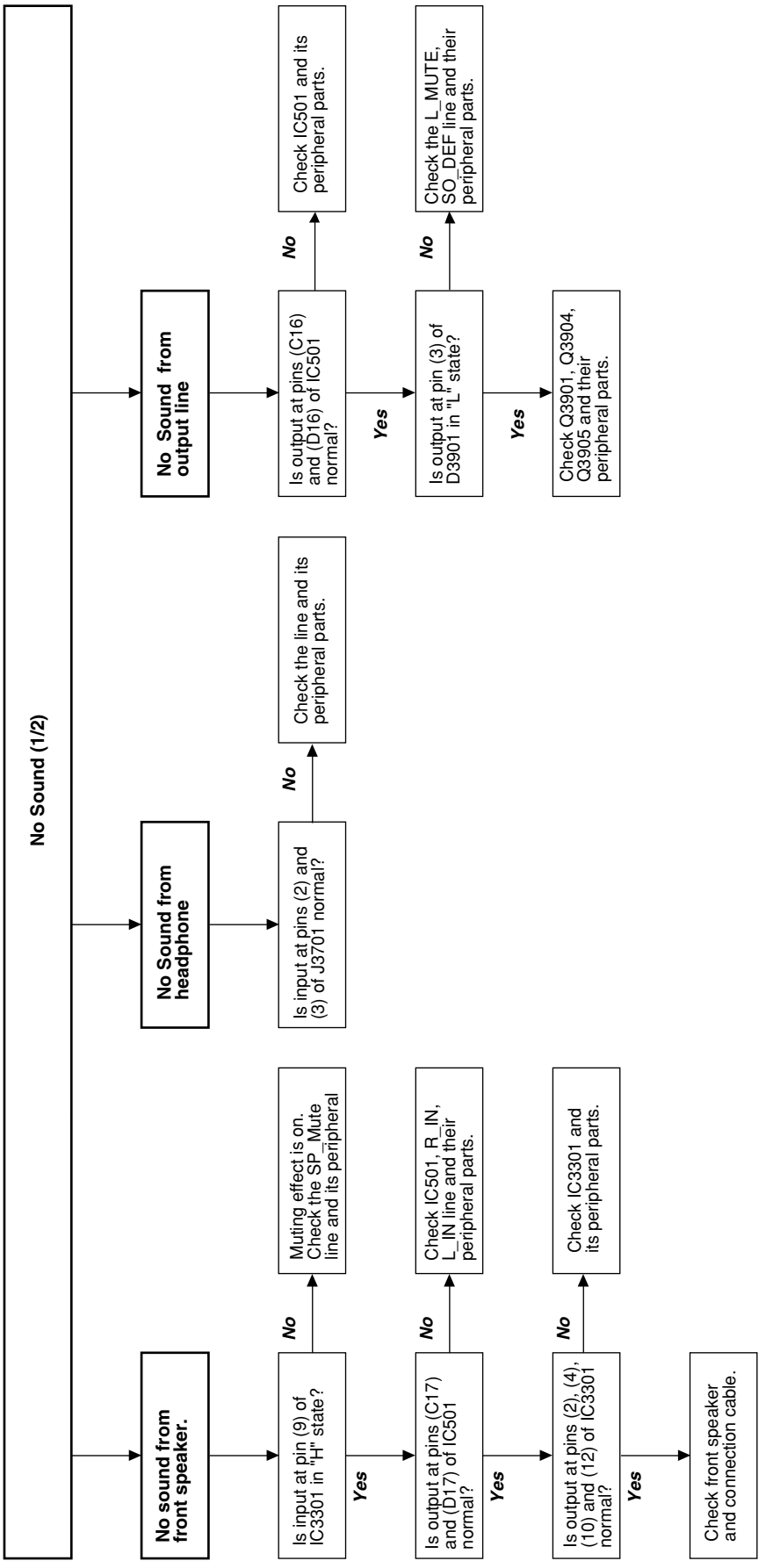

No Picture (1/3)
No picture at all.
Is output Q801, Q802 and Q803 normal?
No
Check IC501 and its peripheral parts.
Yes
Is input / output of IC1201 normal?
No
Check IC1201 and its peripheral parts.
Yes
Check LCD panel voltages and waveform.
No TV output
Is voltage at pins (7) and (9) of tuner normal?
No
Check the power line.
Yes
Is output at pin (11) of tuner normal?
No
Check tuner and its peripheral parts.
Yes
Is input / output of SF201 normal?
No
Check SF201 and its peripheral parts.
Yes
Is output of IC801 normal?
No
Check IC801 and its peripheral parts.
No Video 2 output
Is video input at pin (B21) of IC501 normal?
No
Check the V1_V line and its peripheral parts.
No S-Video output
Is input at pins (C18) and (D18) of IC501 normal?
No
Check the V1_SY and V1_SC line and their peripheral parts.

TROUBLE SHOOTING TABLE (Continued)

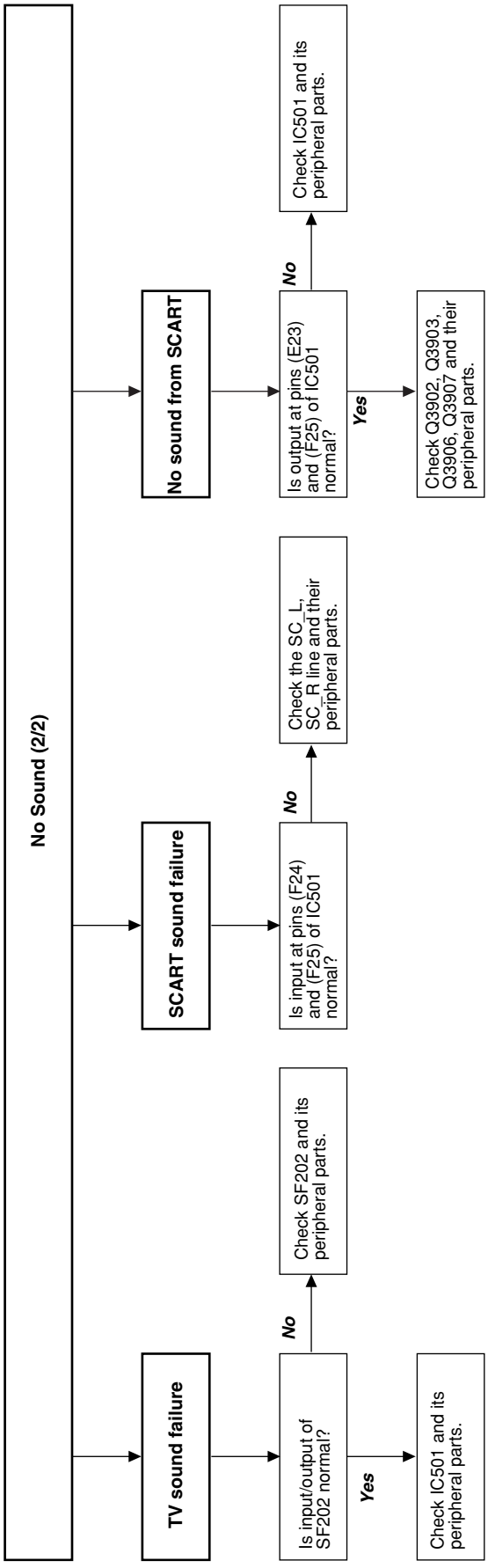

No Picture (2/3)
No Video 1 Output (SCART)
CVBS
Is input at pin (C18) of IC501 normal?
No
Check V1_SY line and its peripheral parts.
R/G/B
Is input at pins (U23), (V23) and (V24) of IC501 normal?
No
Check SC_R, SC_G, SC_B line and their peripheral parts.
No TELETEXT output
Check IC501 and its peripheral parts.
No Video from SCART
Is output at pin (B23) of IC501 normal?
No
Check IC501 and its peripheral parts.
Yes
Check Q3908, Q3909 and their peripheral parts.



TROUBLE SHOOTING TABLE (Continued)

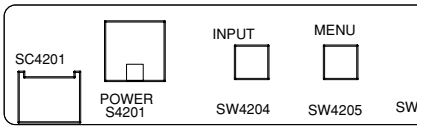

No Sound (1/2)
No sound from front speaker.
Is input at pin (9) of IC3301 in "H" state?
No
Muting effect is on. Check the SP_Mute line and its peripheral
Yes
Is output at pins (C17) and (D17) of IC501 normal?
No
Check IC501, R_IN, L_IN line and their peripheral parts.
Yes
Is output at pins (2), (4), (10) and (12) of IC3301 normal?
No
Check IC3301 and its peripheral parts.
Yes
Check front speaker and connection cable.
No Sound from headphone
Is input at pins (2) and (3) of J3701 normal?
No
Check the line and its peripheral parts.
No Sound from output line
Is output at pins (C16) and (D16) of IC501 normal?
No
Check IC501 and its peripheral parts.
Yes
Is output at pin (3) of D3901 in "L" state?
No
Check the L_MUTE, SO_DEF line and their peripheral parts.
Yes
Check Q3901, Q3904, Q3905 and their peripheral parts.

TROUBLE SHOOTING TABLE (Continued)

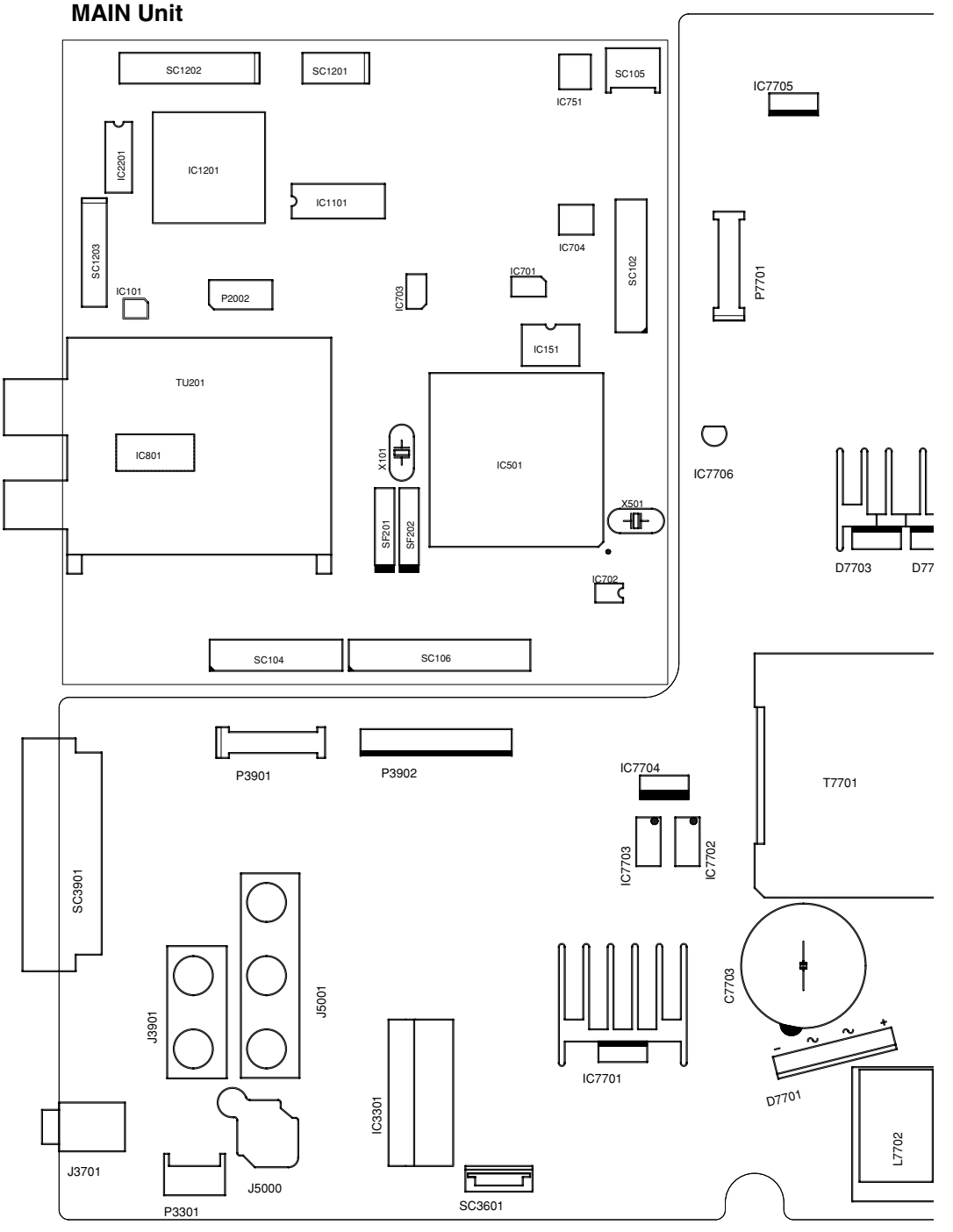

No Sound (2/2)
TV sound failure
Is input/output of SF202 normal?
No
Check SF202 and its peripheral parts.
Yes
Check IC501 and its peripheral parts.
SCART sound failure
Is input at pins (F24) and (F25) of IC501 normal?
No
Check the SC_L, SC_R line and their peripheral parts.
No sound from SCART
Is output at pins (E23) and (F25) of IC501 normal?
No
Check IC501 and its peripheral parts.
Yes
Check Q3902, Q3903, Q3906, Q3907 and their peripheral parts.

CHASSIS LAYOUT

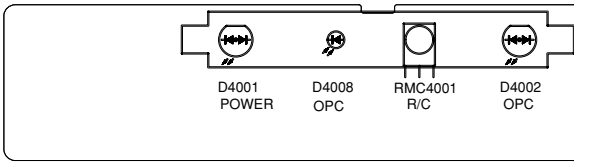
OPERATION Unit



MAIN Unit

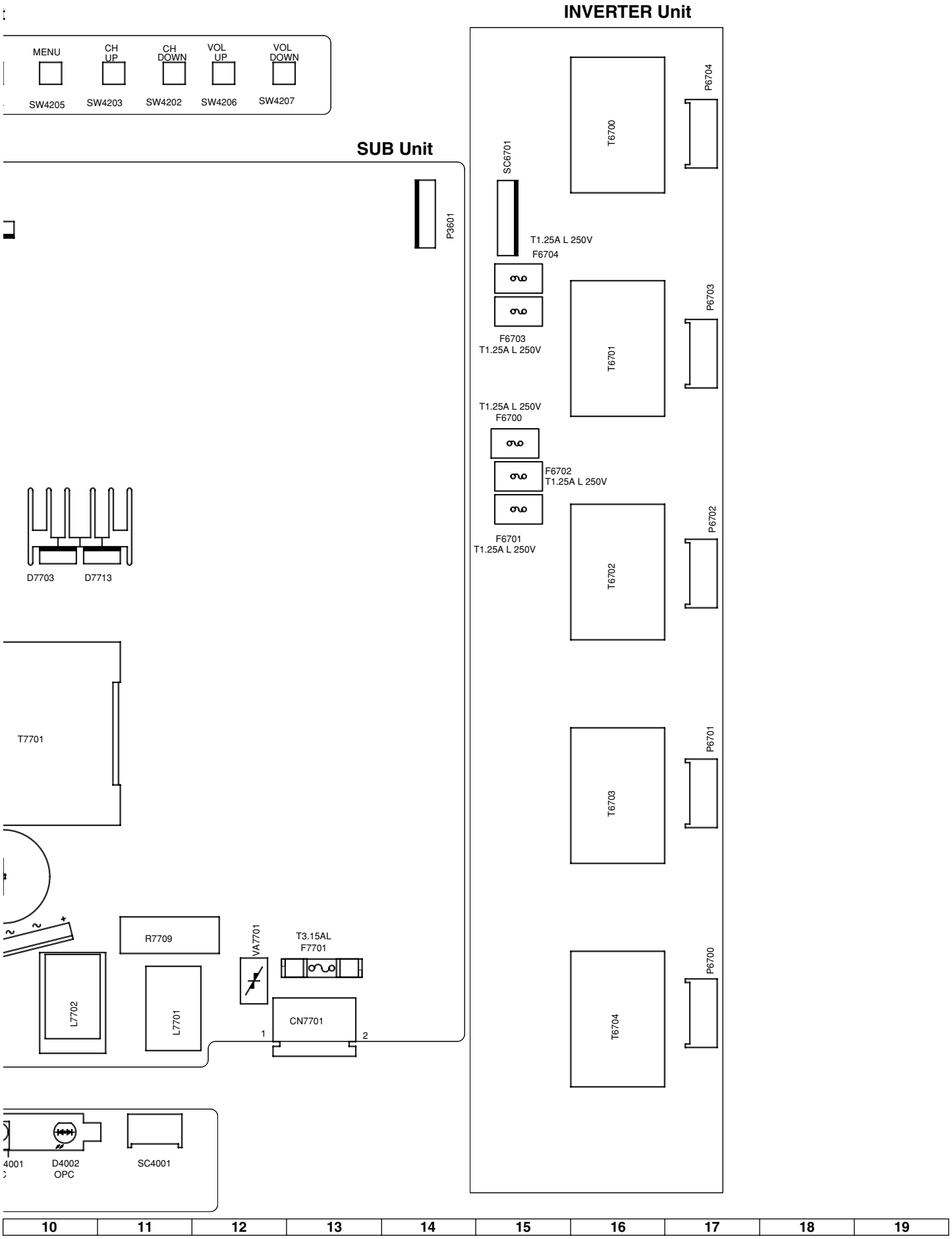


R/C, LED Unit



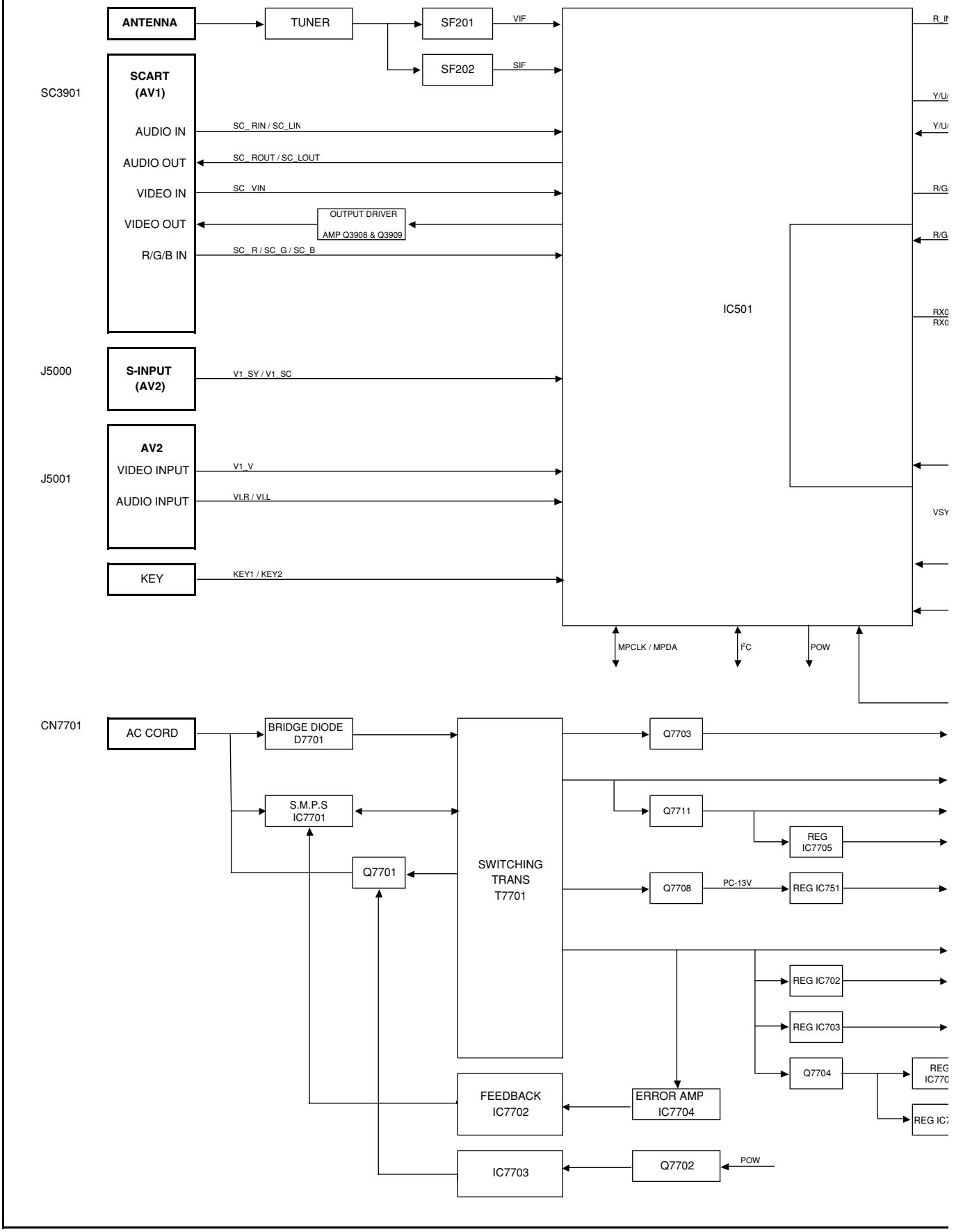
1	2	3	4	5	6	7	8	9	10

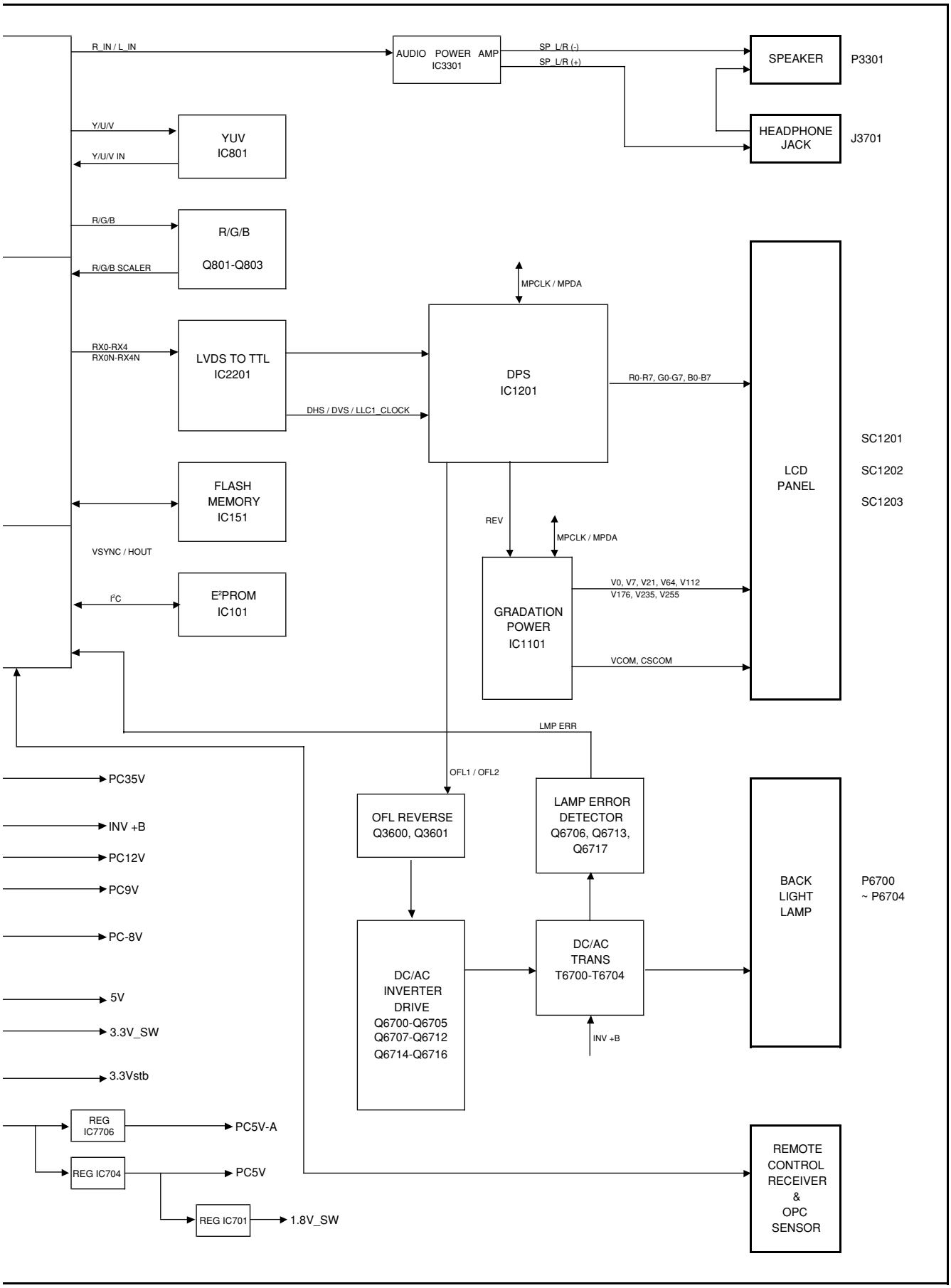
H G F E D C B A



10	11	12	13	14	15	16	17	18	19

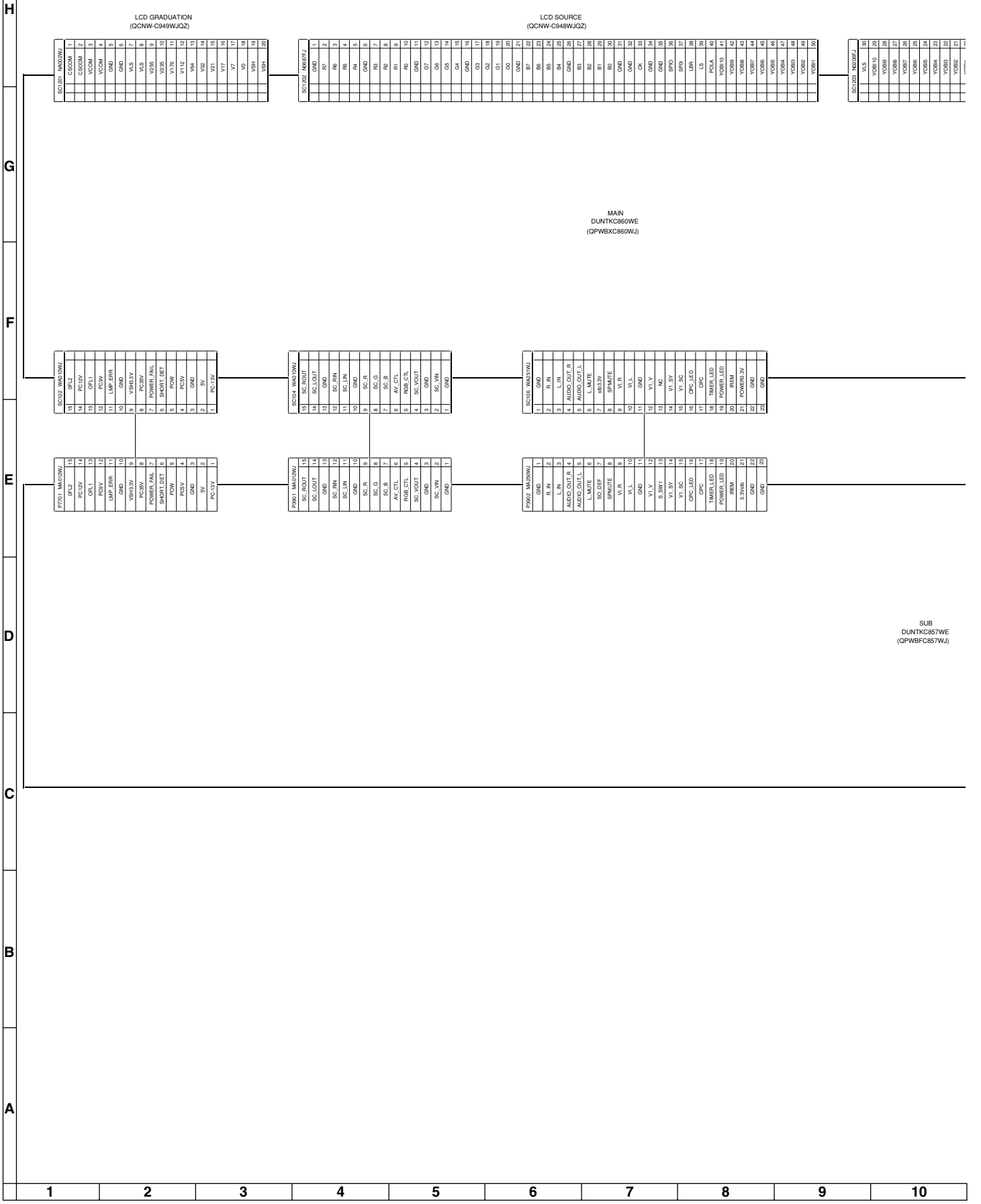
BLOCK DIAGRAM

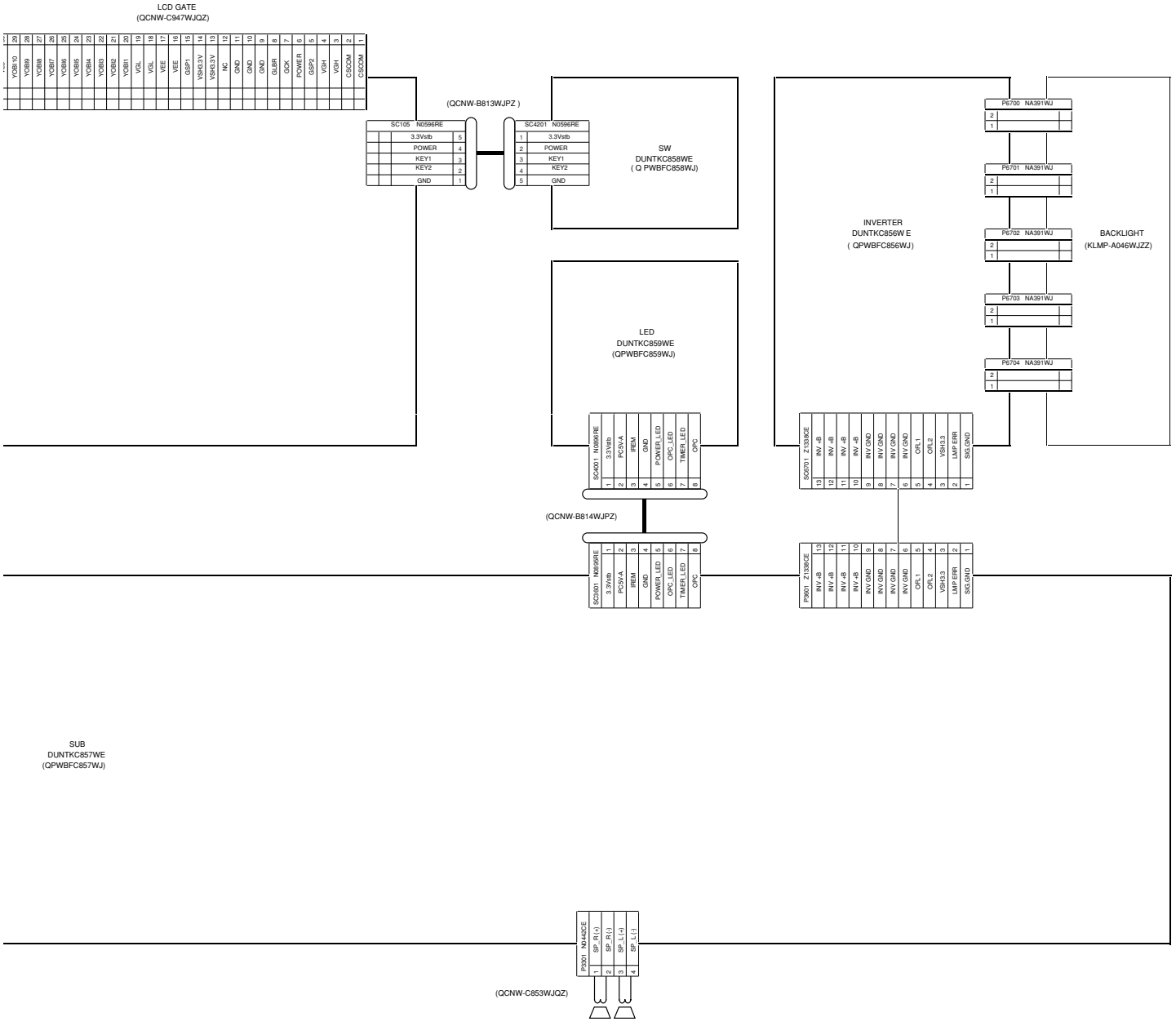




10	11	12	13	14	15	16	17	18	19

OVERALL WIRING DIAGRAM




LCD GATE
(QCNW-C947WJQZ)
(QCNW-B813WJPZ)
SW
DUNTKC858WE
(Q PWBFC858WJ)
INVERTER
DUNTKC856W E
(QPWBFC856WJ)
BACKLIGHT
(KLMP-A046WJZZ)
LED
DUNTKC859WE
(QPWBFC859WJ)
(QCNW-B814WJPZ)
SUB
DUNTKC857WE
(QPWBFC857WJ)
(QCNW-C853WJQZ)

DESCRIPTION OF SCHEMATIC DIAGRAM

VOLTAGE MEASUREMENT CONDITION:

1. The voltages at test points are measured on the stable supply voltage of AC 220-240V. Signals are fed by a colour bar signal generator for servicing purpose and the above voltages are measured with a 20k ohm/V tester.

INDICATION OF RESISTOR & CAPACITOR:

RESISTOR

1. The unit of resistance "Ω" is omitted. (K=kΩ=1000 Ω, M=MΩ).
2. All resistors are ± 5%, unless otherwise noted. (J= ± 5%, F= ± 1%, D= ± 0.5%)
3. All resistors are 1/16W, unless otherwise noted.
4. All resistors are Carbon type, unless otherwise noted.
   Ⓒ: Solid Ⓦ: Cement
   Ⓢ: Oxide Film Ⓣ: Special
   Ⓝ: Metal Coating

CAPACITOR

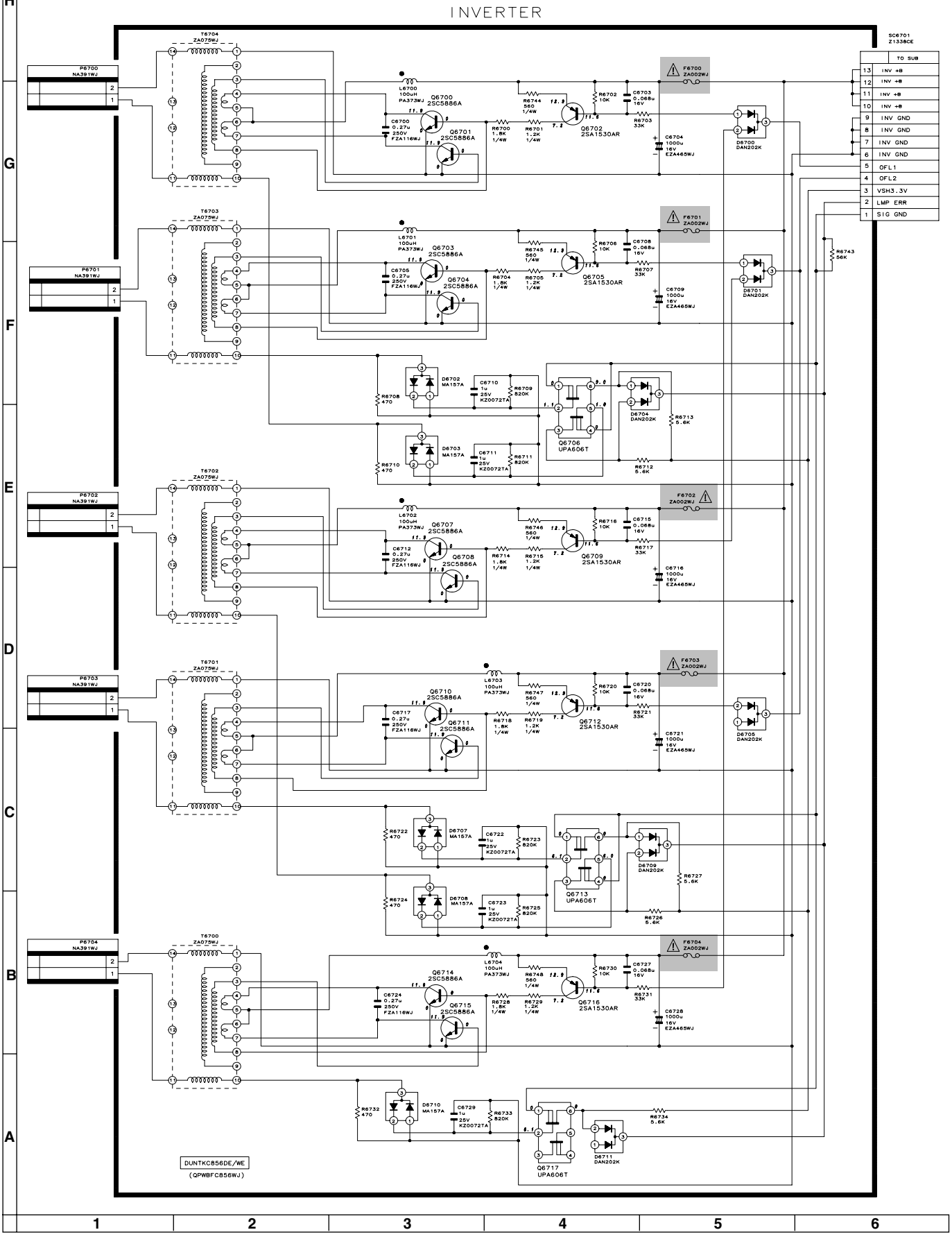
1. All capacitors are μF, unless otherwise noted. (P=pF=μμF).
2. All capacitors are 50V, unless otherwise noted.
3. All capacitors are Ceramic type, unless otherwise noted.
   (ML): Mylar (TA): Tantalum
   (PF): Polypro Film (ST): Styrol

CAUTION:
This circuit diagram is original one, therefore there may be a slight difference from yours.

IMPORTANT SAFETY NOTICE:
PARTS MARKED WITH "⚠" ( ) ARE IMPORTANT FOR MAINTAINING THE SAFETY OF THE SET. BE SURE TO REPLACE THESE PARTS WITH SPECIFIED ONES FOR MAINTAINING THE SAFETY AND PERFORMANCE OF THE SET.

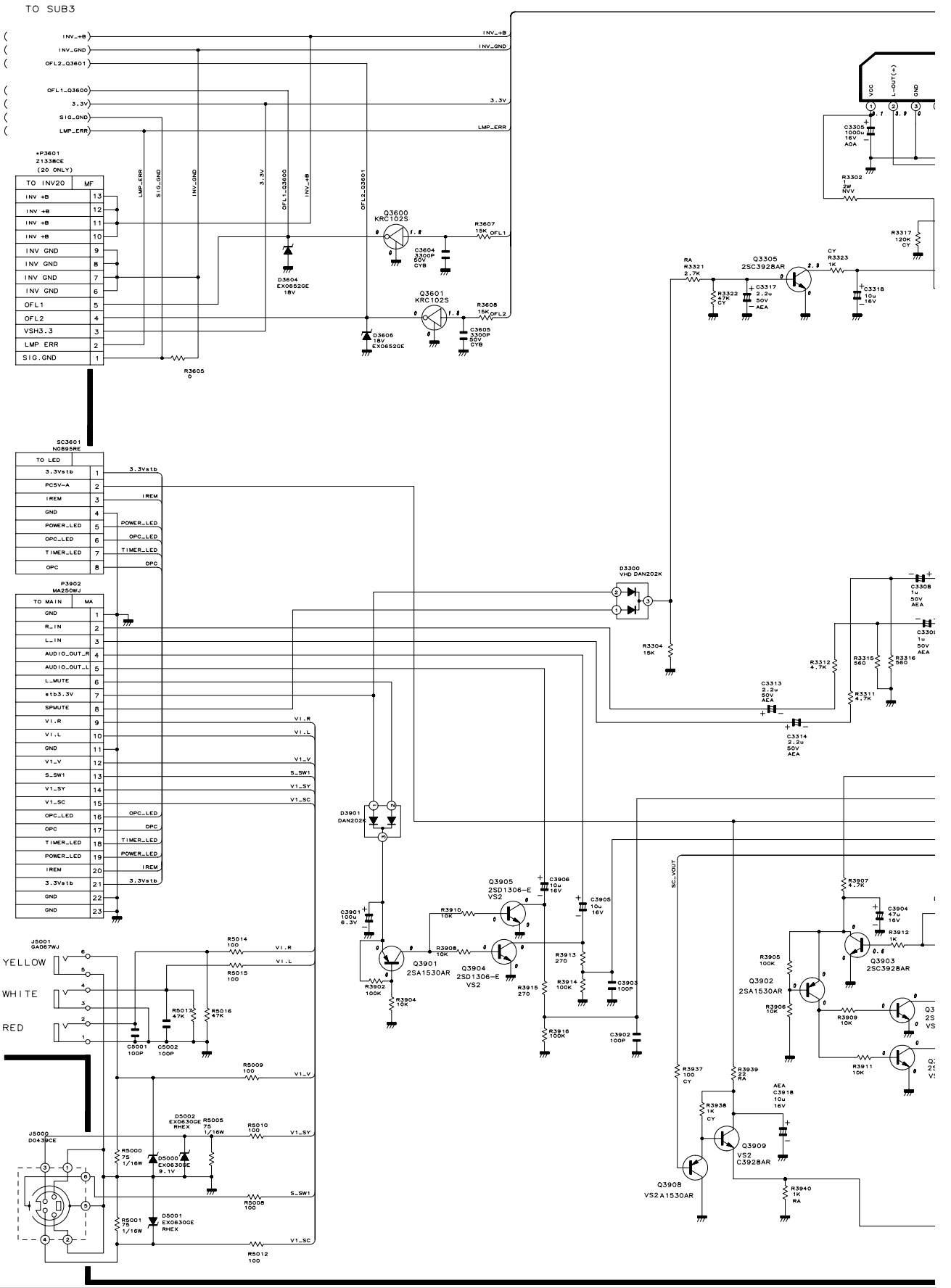
SCHEMATIC DIAGRAM

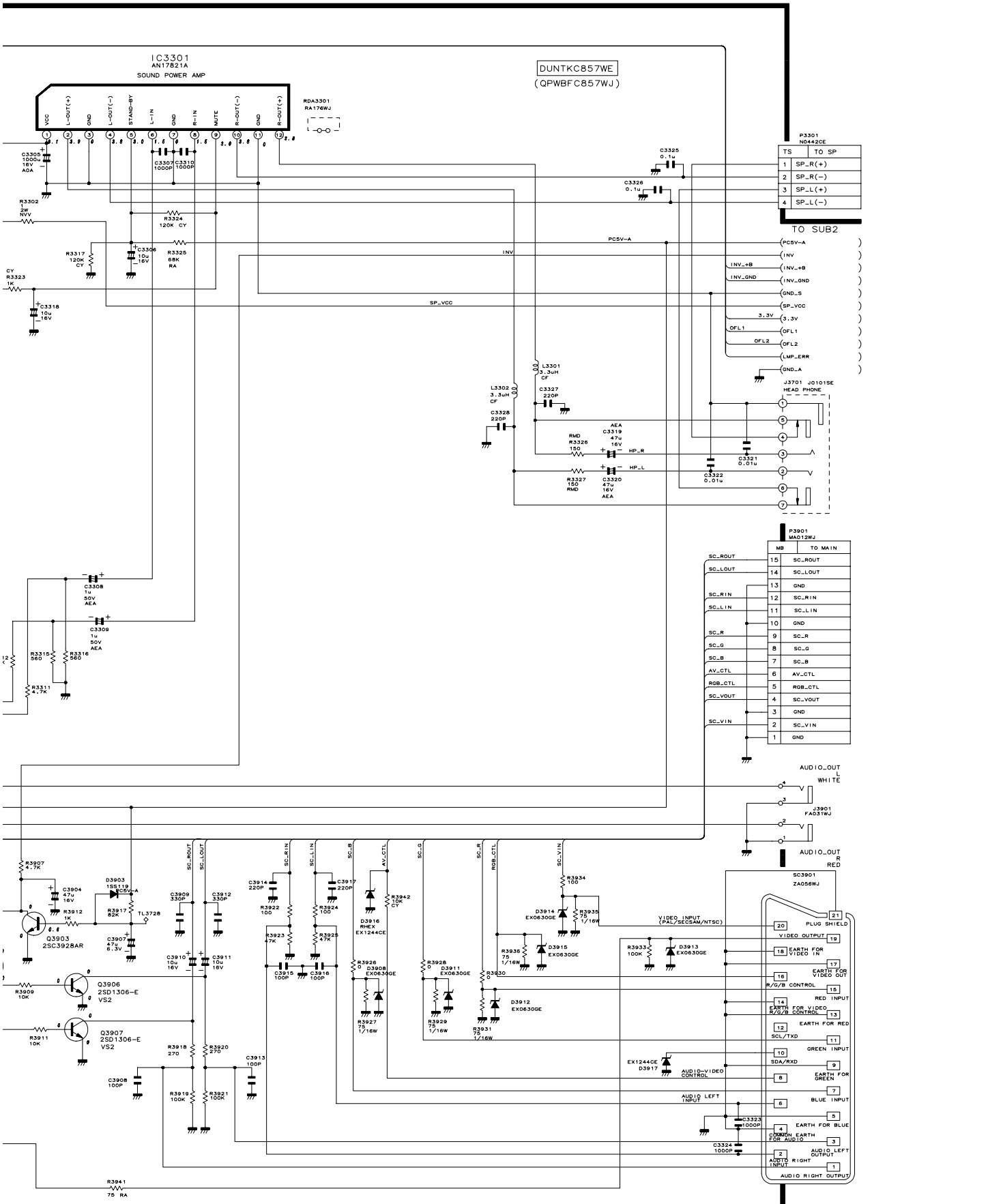
■ INVERTER Unit



■ SUB Unit-1/2

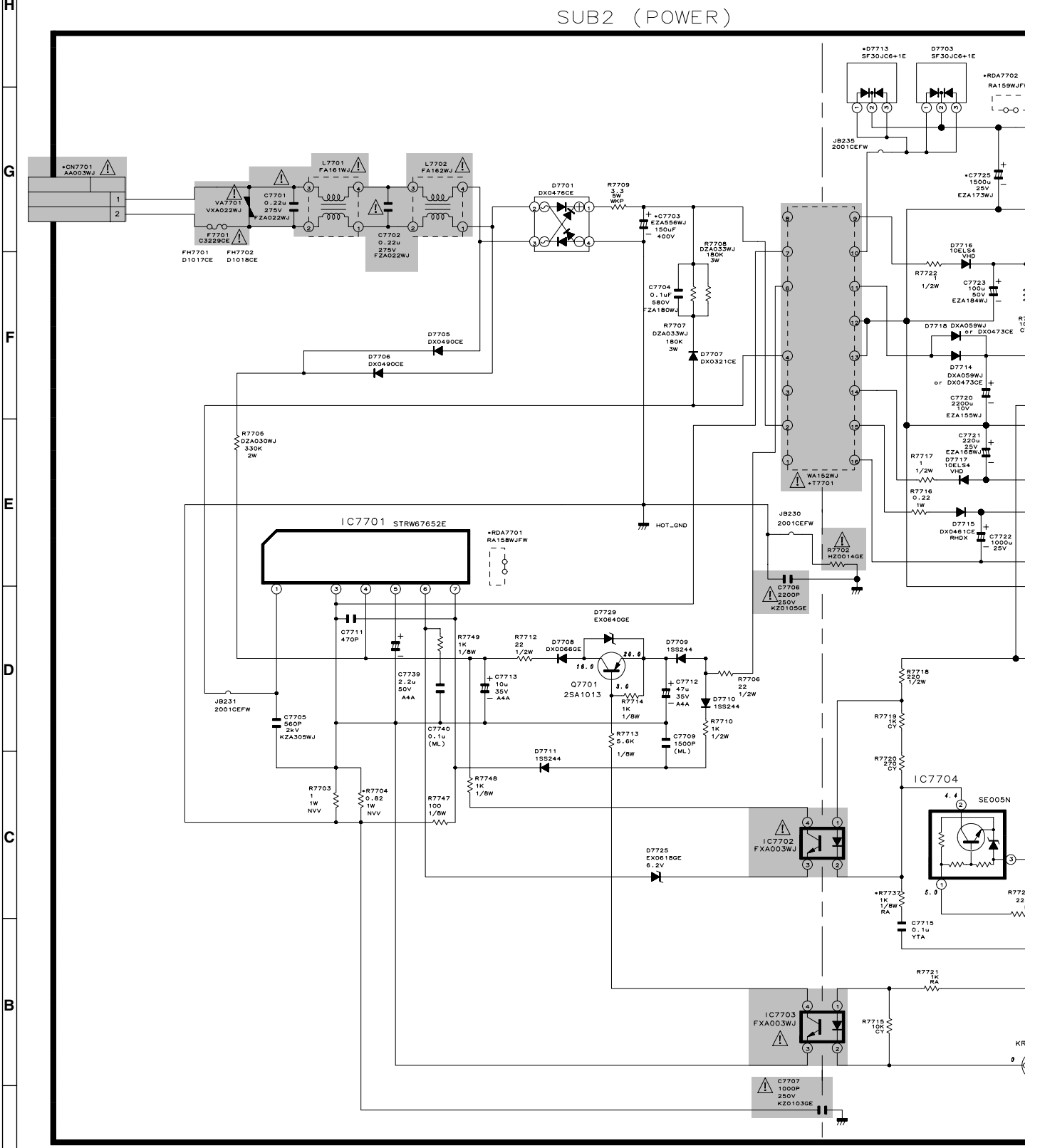
SUB1 (AV_TERMINAL)

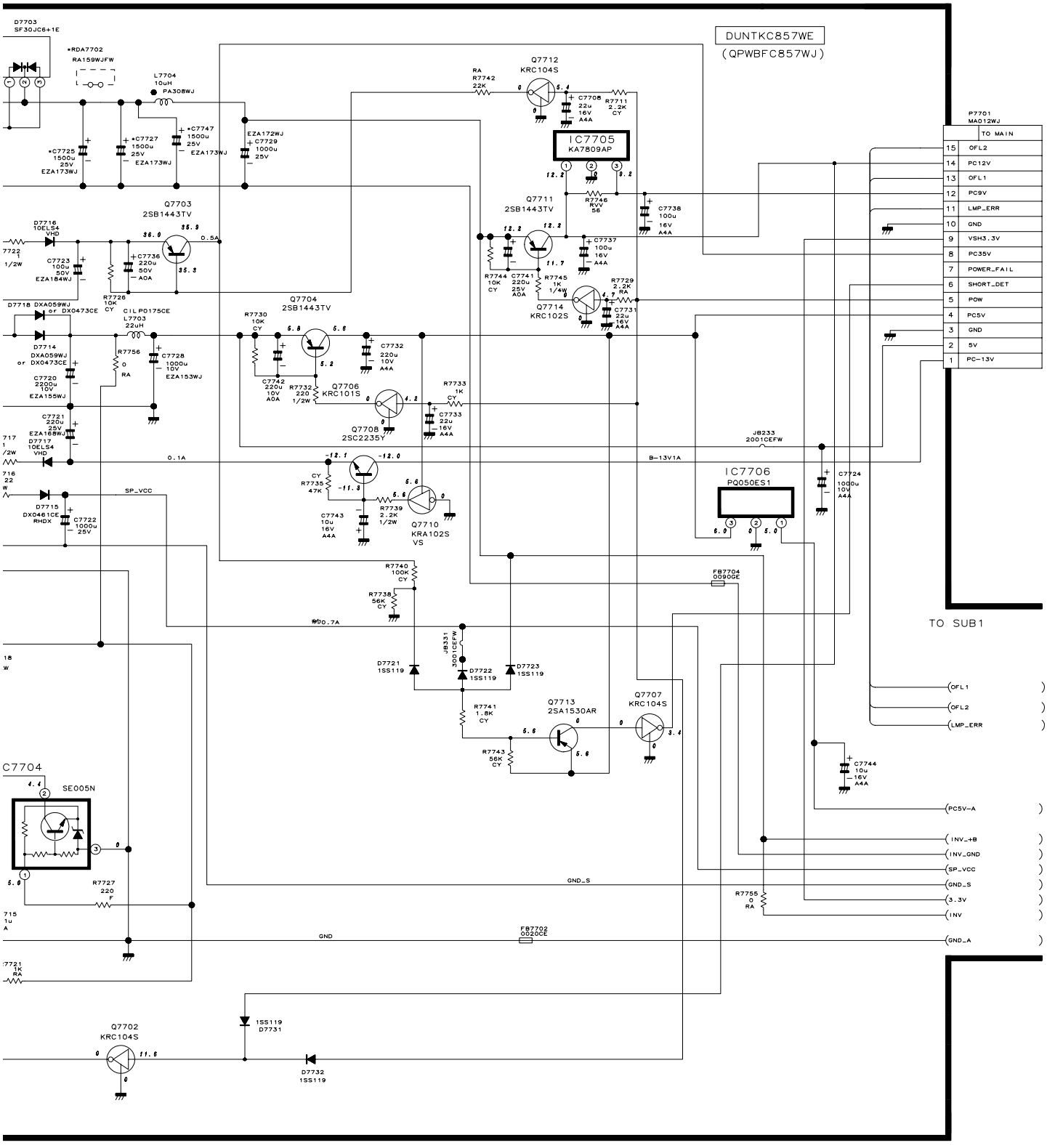




10	11	12	13	14	15	16	17	18	19

■ SUB Unit-2/2

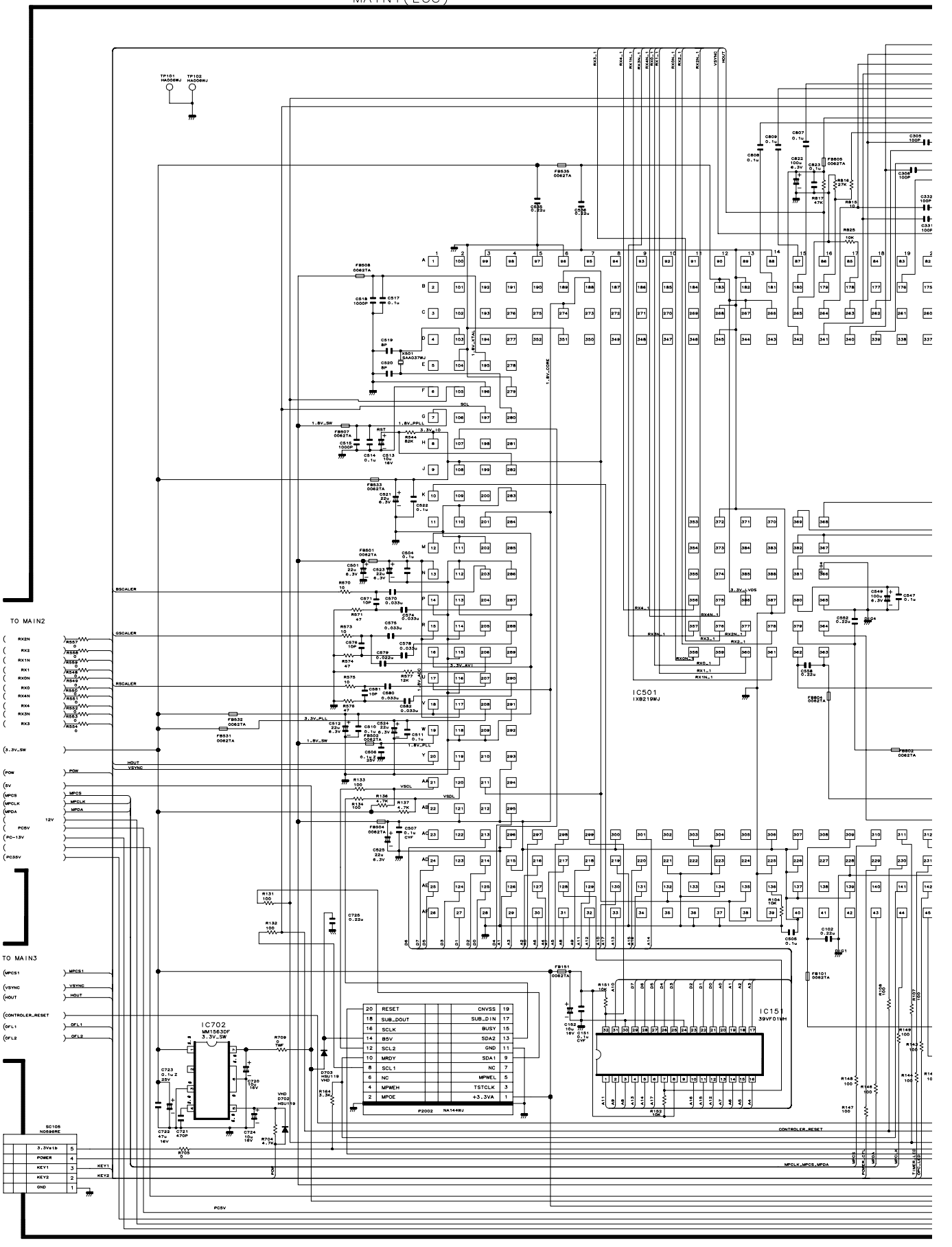

SUB2 (POWER)
IC7701 STRW67652E
Q7701 2SA1013
IC7704
SE005N
IC7702 FXA003WJ
IC7703 FXA003WJ
WA152WJ *T7701
HOT_GND
JB230 2001CEFW
JB231 2001CEFW
JB235 2001CEFW
*CN7701 AA003WJ
VA7701 VXA022WJ
F7701 C3229CE
FH7701 D1017CE
FH7702 D1018CE
L7701 FA161WJ
L7702 FA162WJ
C7701 0.22u 275V FZA022WJ
C7702 0.22u 275V FZA022WJ
*RDA7701 RA158WJFW
*RDA7702 RA159WJFW
*D7713 SF30JC6+1E
D7703 SF30JC6+1E
D7701 DX0476CE
D7705 DX0490CE
D7706 DX0490CE
D7707 DX0321CE
D7708 DX0066GE
D7709 1SS244
D7710 1SS244
D7711 1SS244
D7729 EX0640GE
D7725 EX0618GE 6.2V
D7715 DX0461CE RHDX
D7716 10ELS4 VHD
D7717 10ELS4 VHD
D7718 DXA059WJ or DX0473CE
D7714 DXA059WJ or DX0473CE
R7705 DZA030WJ 330K 2W
R7707 DZA033WJ 180K 3W
R7708 DZA033WJ 180K 3W
R7709 3.3 5W WKP
R7722 1 1/2W
R7717 1 1/2W
R7716 0.22 1W
R7702 HZ0014GE
R7703 1 1W NVV
*R7704 0.82 1W NVV
R7747 100 1/6W
R7748 1K 1/8W
R7749 1K 1/8W
R7712 22 1/2W
R7714 1K 1/8W
R7713 5.6K 1/8W
R7706 22 1/2W
R7710 1K 1/2W
R7718 220 1/2W
R7719 1K CY
R7720 270 CY
*R7733 1K 1/8W RA
R7721 1K RA
R7715 10K CY
C7704 0.1uF 50V FZA180WJ
*C7703 EZA556WJ 150uF 400V
*C7725 1500u 25V EZA173WJ
C7723 100u 50V EZA184WJ
C7720 2200u 10V EZA155WJ
C7721 220u 25V EZA168WJ
C7722 1000u 25V
C7706 2200P 250V KZ0105GE
C7707 1000P 250V KZ0103GE
C7711 470P
C7739 2.2u 50V A4A
C7740 0.1u (ML)
C7713 10u 35V A4A
C7712 47u 35V A4A
C7709 1500P (ML)
C7705 560P 2kV KZA305WJ
C7715 0.1u YTA

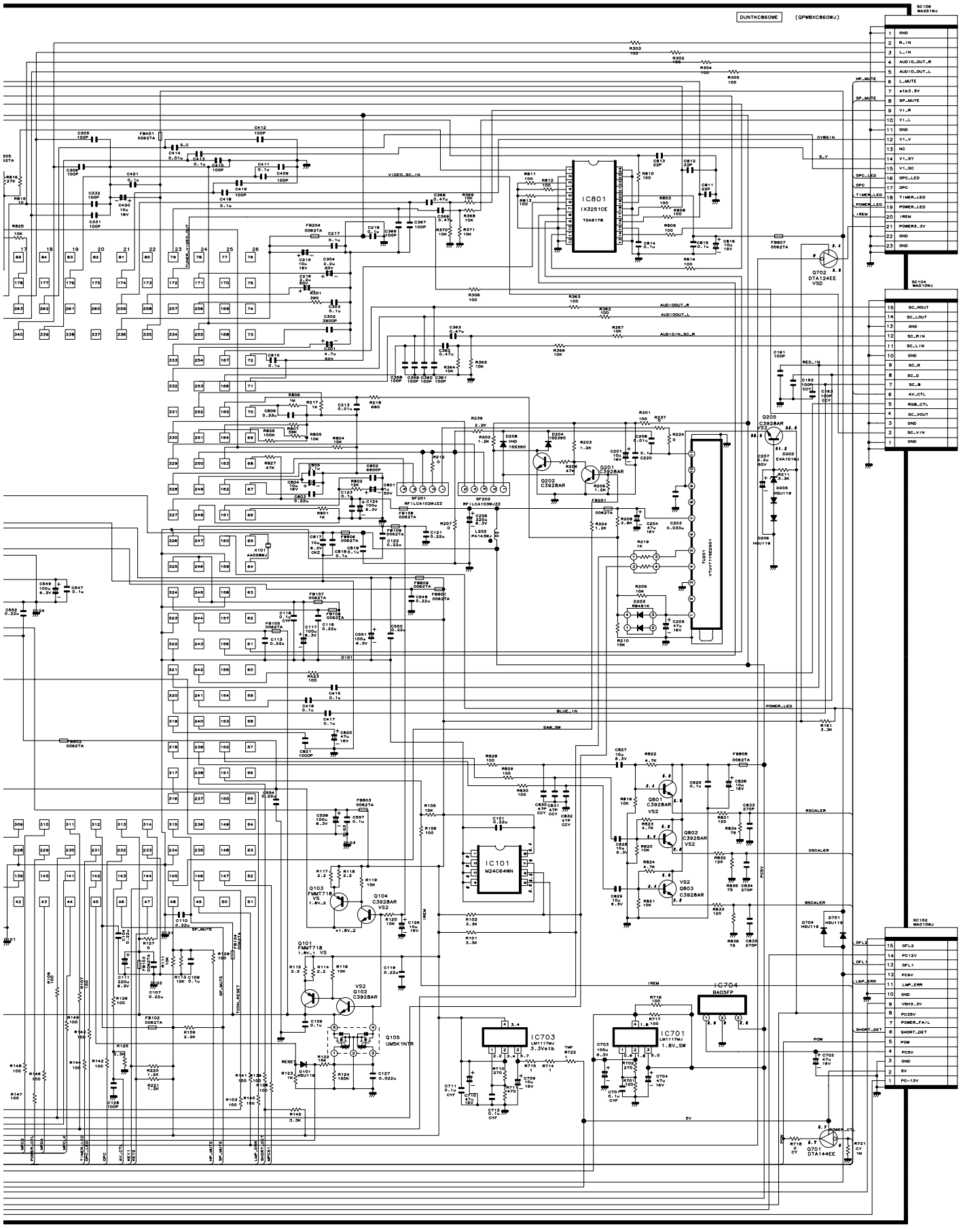


10	11	12	13	14	15	16	17	18	19

■ MAIN Unit-1/3

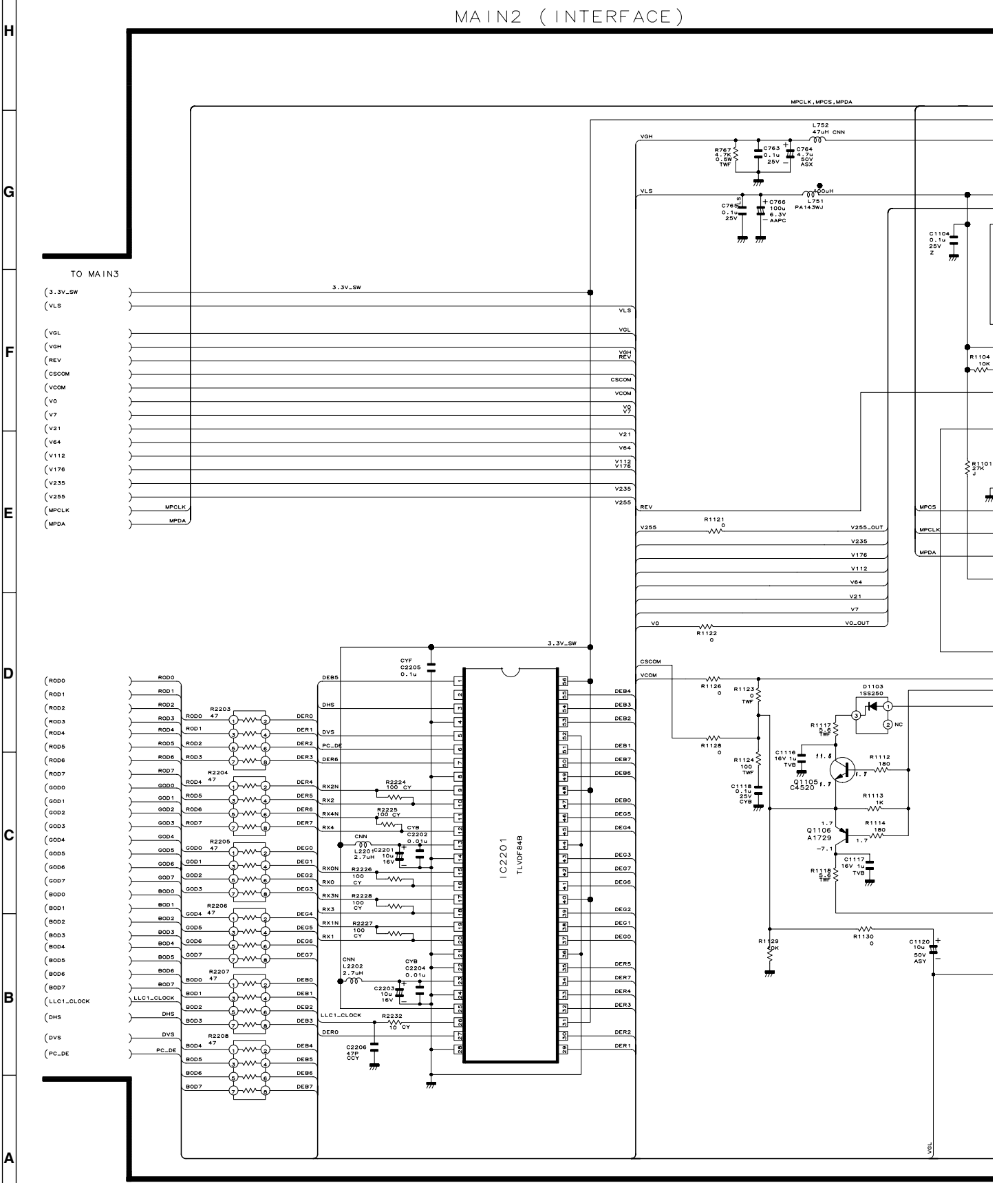
MAIN1(LOC)

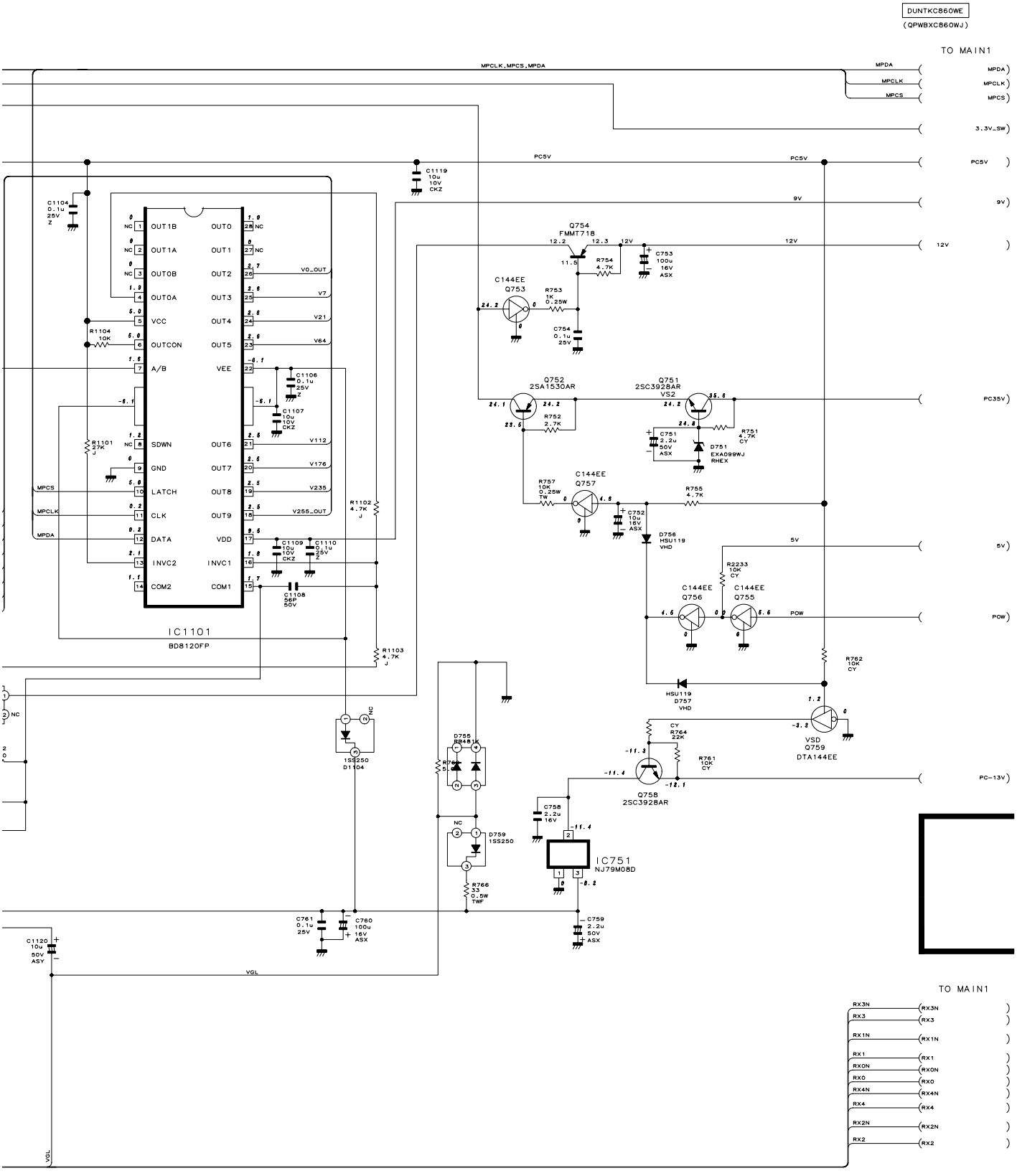




10	11	12	13	14	15	16	17	18	19

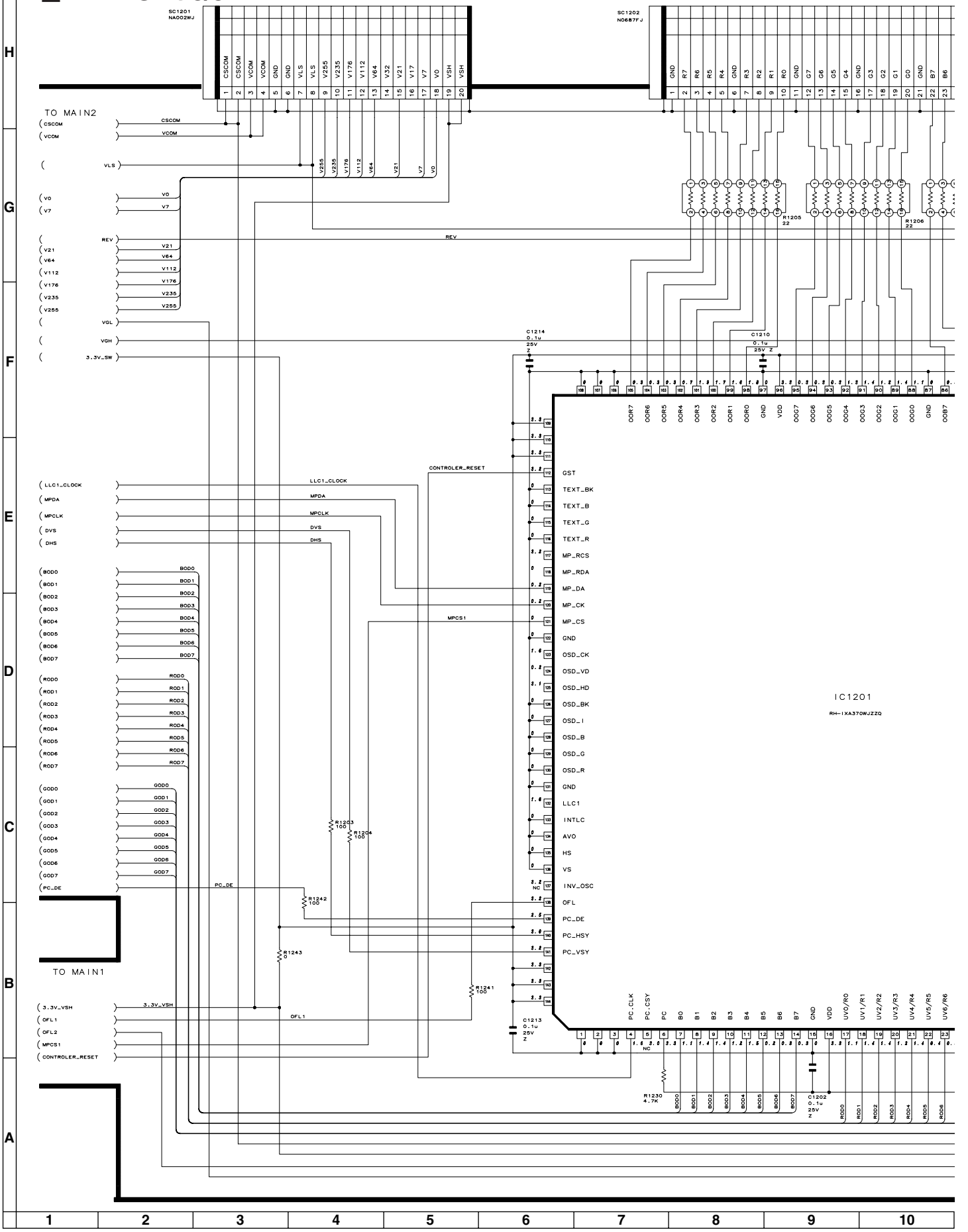
■ MAIN Unit-2/3

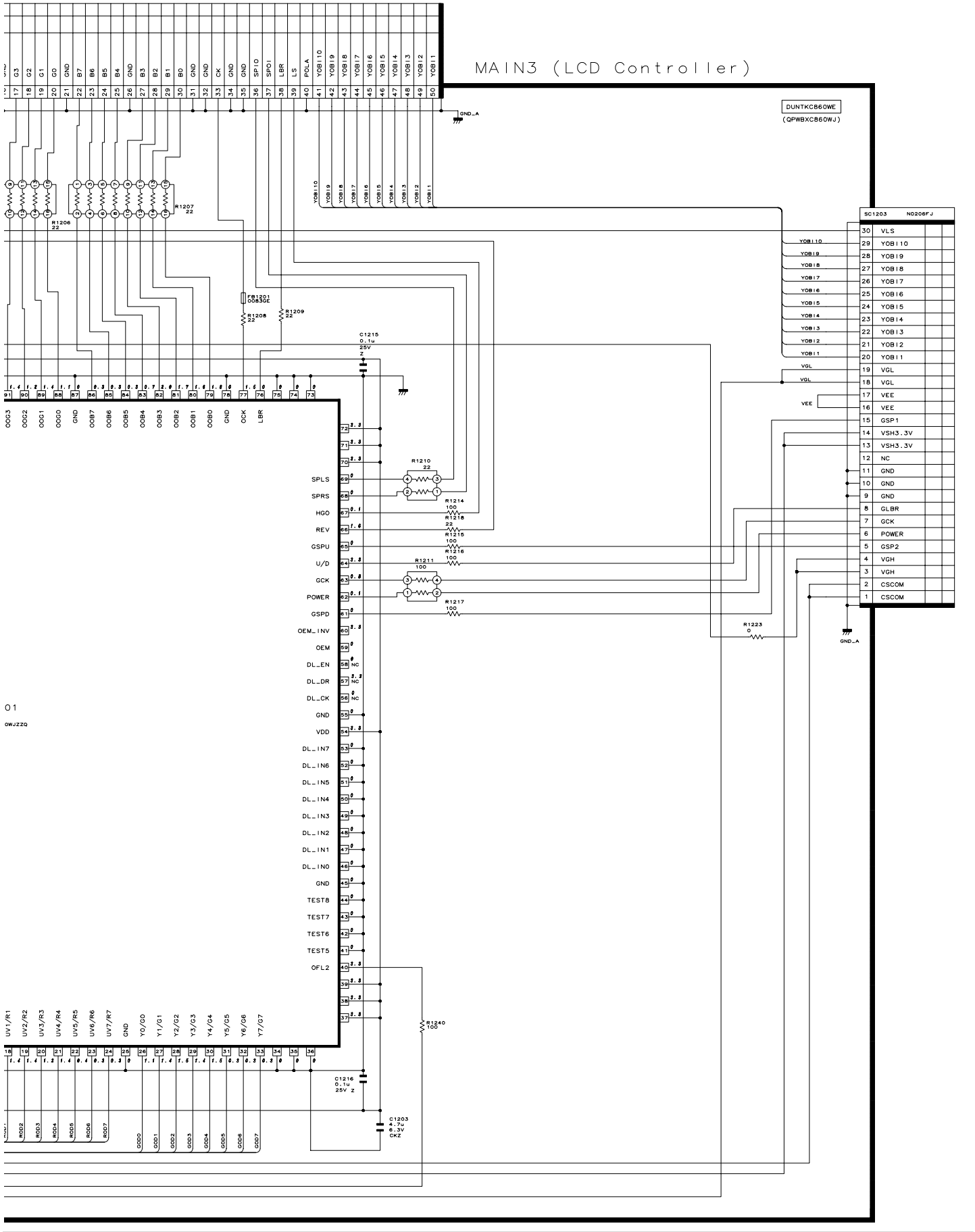

MAIN2 (INTERFACE)
TO MAIN3
3.3V_SW
VLS
VGL
VGH
REV
CSCOM
VCOM
V0
V7
V21
V64
V112
V176
V235
V255
MPCLK
MPDA
MPCS
V255_OUT
V0_OUT
IC2201
TLVDF84B
L752
47uH CNN
L751
PA143WJ
D1103
1SS250
Q1105
C4520
Q1106
A1729



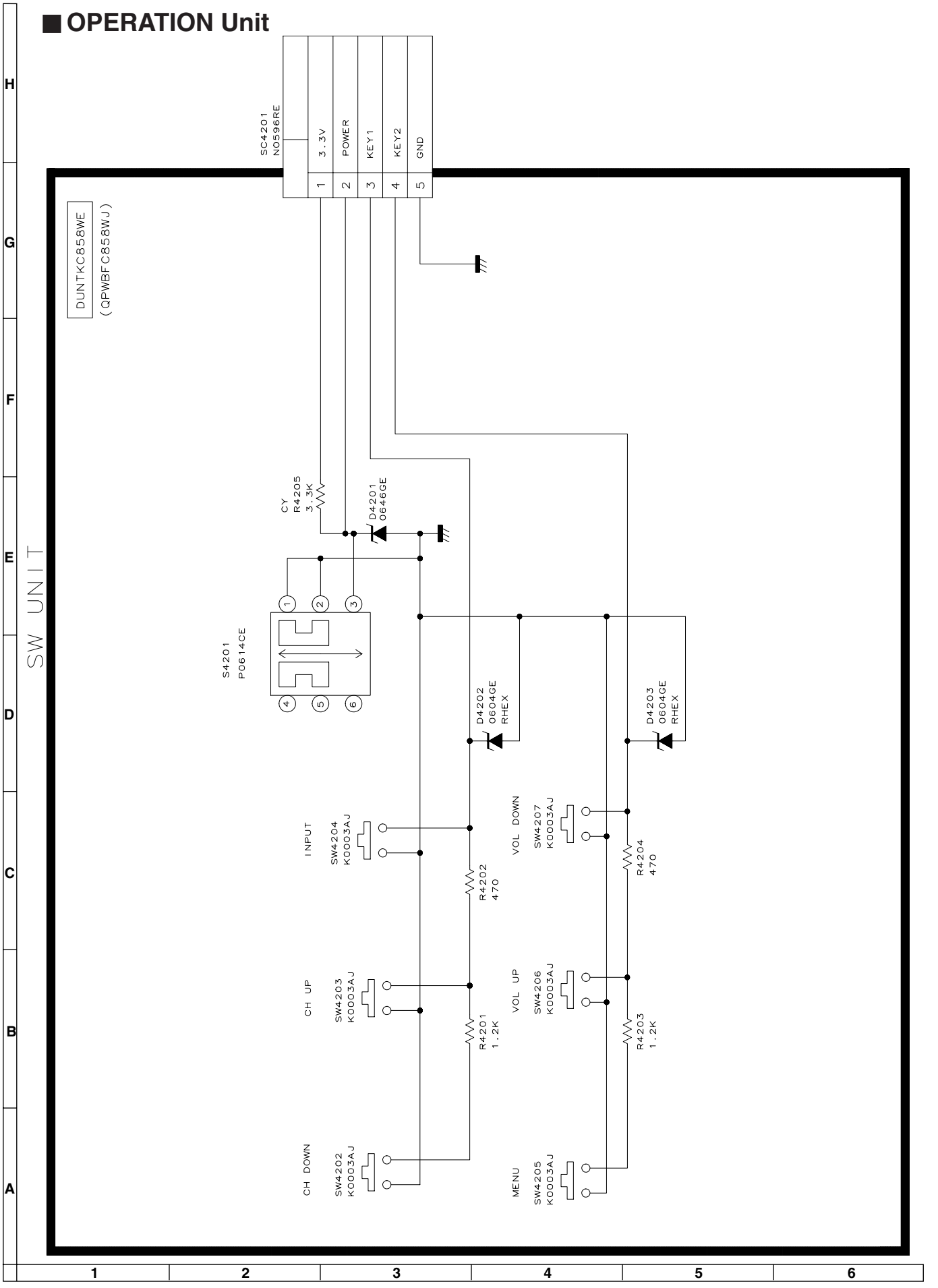
10	11	12	13	14	15	16	17	18	19

■ MAIN Unit-3/3

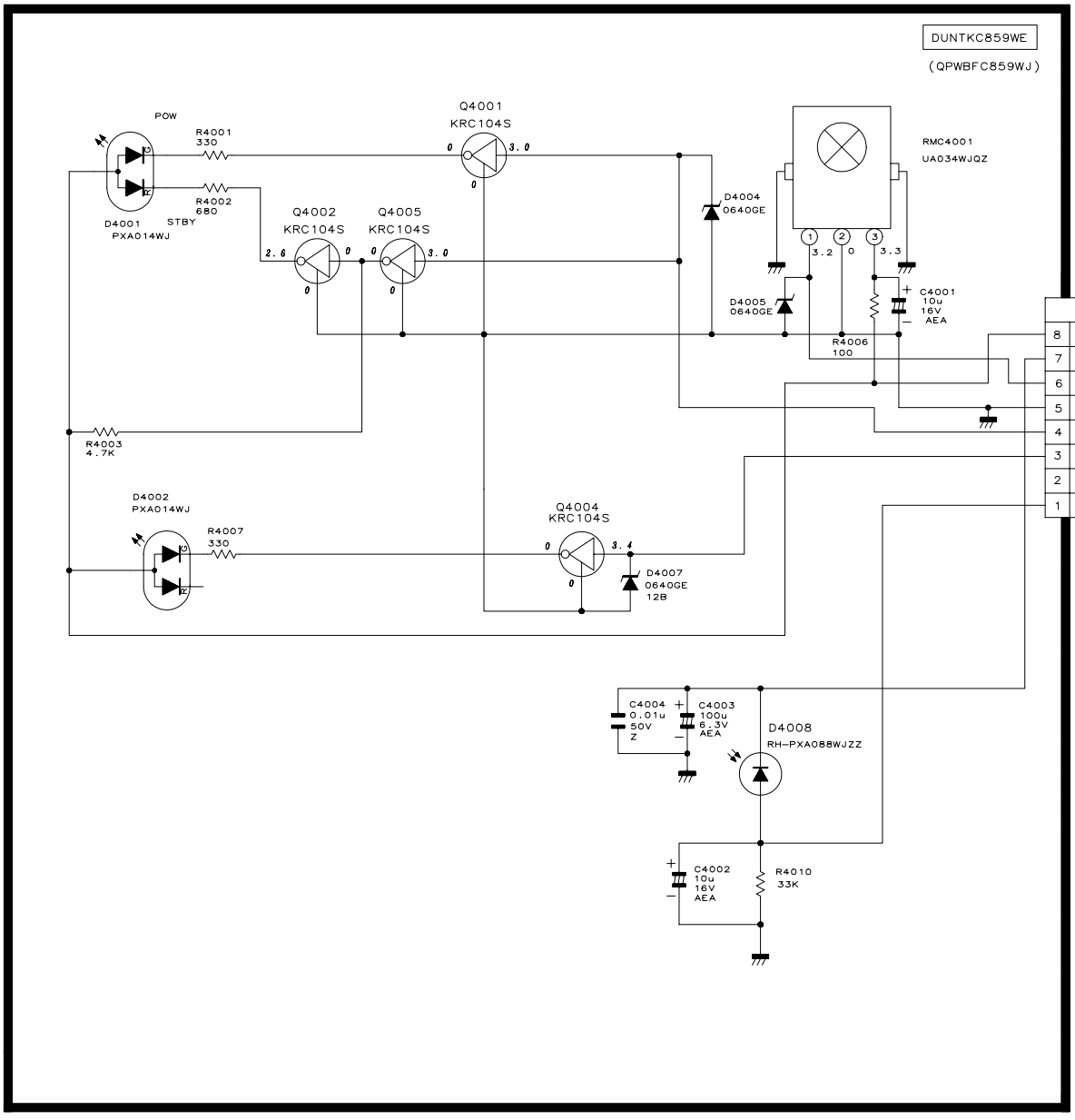

SC1201
NA002WJ
SC1202
N0687FJ
TO MAIN2
TO MAIN1
IC1201
RH-IXA370WJZZQ
CSCOM
VCOM
VLS
V0
V7
REV
V21
V64
V112
V176
V235
V255
VGL
VGH
3.3V_SW
C1214
0.1u
25V
Z
C1210
0.1u
25V Z
R1205
22
R1206
22
CONTROLER_RESET
LLC1_CLOCK
MPDA
MPCLK
DVS
DHS
MPCS1
BOD0
BOD1
BOD2
BOD3
BOD4
BOD5
BOD6
BOD7
ROD0
ROD1
ROD2
ROD3
ROD4
ROD5
ROD6
ROD7
GOD0
GOD1
GOD2
GOD3
GOD4
GOD5
GOD6
GOD7
PC_DE
R1203
100
R1204
100
R1242
100
R1243
0
R1241
100
3.3V_VSH
OFL1
OFL2
C1213
0.1u
25V
Z
R1230
4.7K
C1202
0.1u
25V
Z
GST
TEXT_BK
TEXT_B
TEXT_G
TEXT_R
MP_RCS
MP_RDA
MP_DA
MP_CK
MP_CS
GND
OSD_CK
OSD_VD
OSD_HD
OSD_BK
OSD_I
OSD_B
OSD_G
OSD_R
GND
LLC1
INTLC
AVO
HS
VS
INV_OSC
OFL
PC_DE
PC_HSY
PC_VSY
OOR7
OOR6
OOR5
OOR4
OOR3
OOR2
OOR1
OOR0
GND
VDD
OOG7
OOG6
OOG5
OOG4
OOG3
OOG2
OOG1
OOG0
GND
OOB7
PC_CLK
PC_CSY
PC
BO
B1
B2
B3
B4
B5
B6
B7
GND
VDD
UV0/R0
UV1/R1
UV2/R2
UV3/R3
UV4/R4
UV5/R5
UV6/R6


MAIN3 (LCD Controller)
DUNTKC860WE
(QPWBXC860WJ)
SC1203 N0206FJ
GND_A
R1207 22
R1206 22
FB1201 0GB3GE
R1208 22
R1209 22
C1215 0.1u 25V Z
R1210 22
R1214 100
R1218 22
R1215 100
R1216 100
R1211 100
R1217 100
R1223 0
R1240 100
C1216 0.1u 25V Z
C1203 4.7u 6.3V CKZ
SPLS
SPRS
HGO
REV
GSPU
U/D
GCK
POWER
GSPD
OEM_INV
OEM
DL_EN
DL_DR
DL_CK
GND
VDD
DL_IN7
DL_IN6
DL_IN5
DL_IN4
DL_IN3
DL_IN2
DL_IN1
DL_IN0
TEST8
TEST7
TEST6
TEST5
OFL2
VLS
VGL
VEE
GSP1
VSH3.3V
NC
GLBR
GCK
POWER
GSP2
VGH
CSCOM

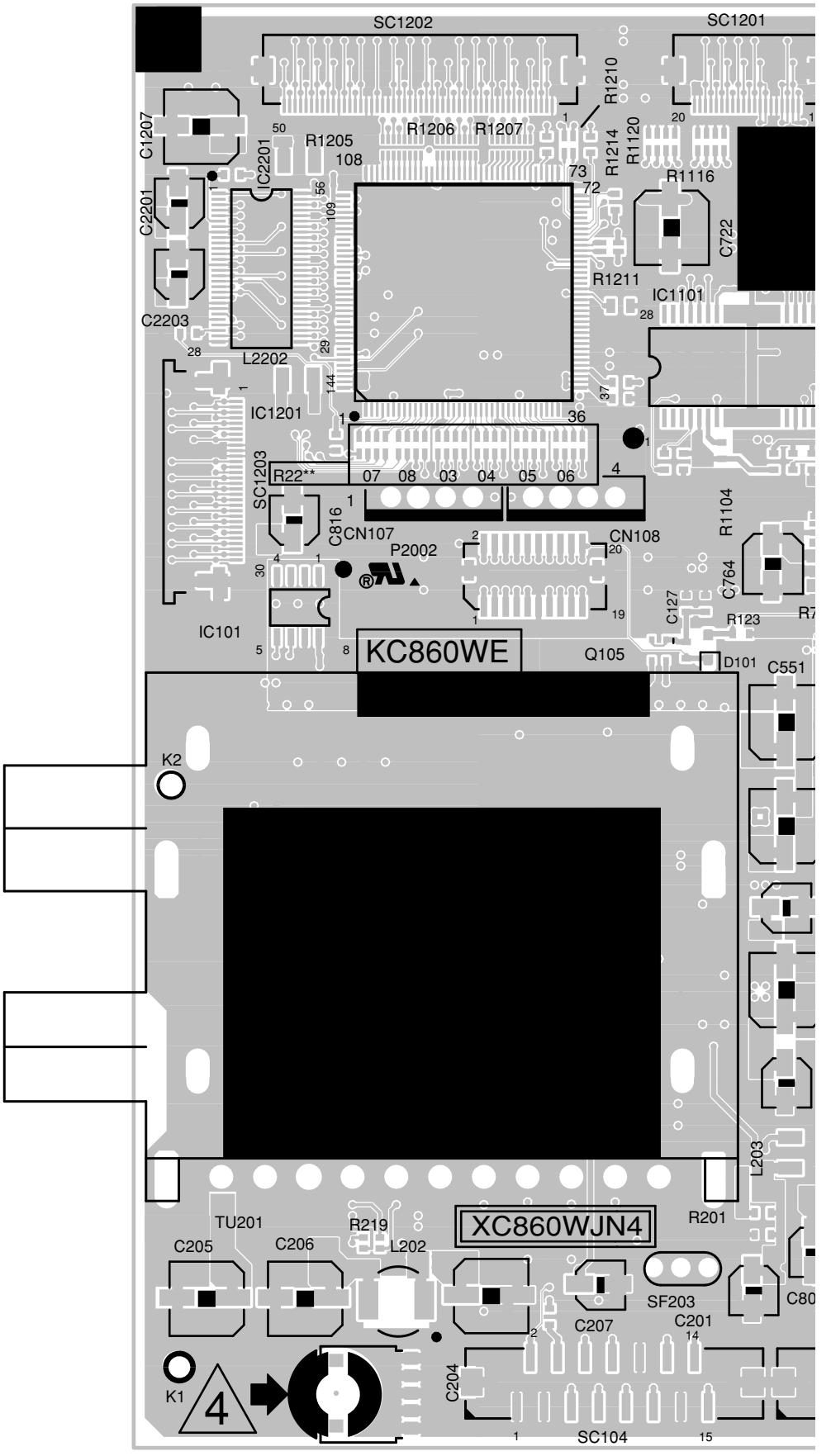
■ OPERATION Unit



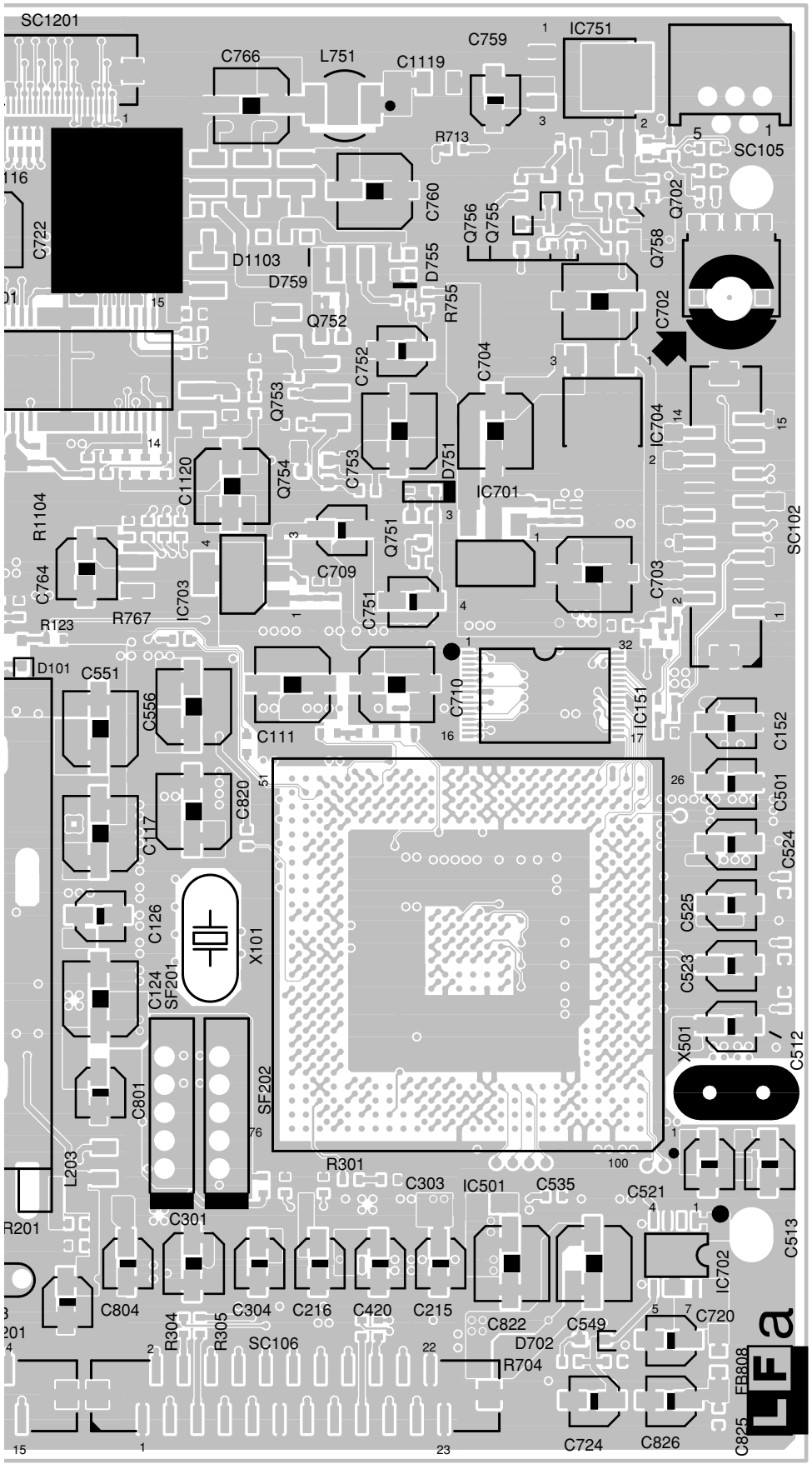
■ R/C, LED Unit


LED UNIT
DUNTKC859WE
(QPWBFC859WJ)
POW
R4001
330
R4002
680
STBY
D4001
PXA014WJ
Q4001
KRC104S
Q4002
KRC104S
Q4005
KRC104S
D4004
0640GE
RMC4001
UA034WJQZ
D4005
0640GE
C4001
10u
16V
AEA
R4006
100
SC4001
N0896RE
8 3.3Vstb
7 PC5V-A
6 IREM
5 GND
4 POWER_LED
3 OPC_LED
2 TIMER_LED
1 OPC
R4003
4.7K
D4002
PXA014WJ
R4007
330
Q4004
KRC104S
D4007
0640GE
12B
C4004
0.01u
50V
Z
C4003
100u
6.3V
AEA
D4008
RH-PXA088WJZZ
C4002
10u
16V
AEA
R4010
33K

PRINTED WIRING BOARD ASSEMBLIES



MAIN Unit (Side-A)



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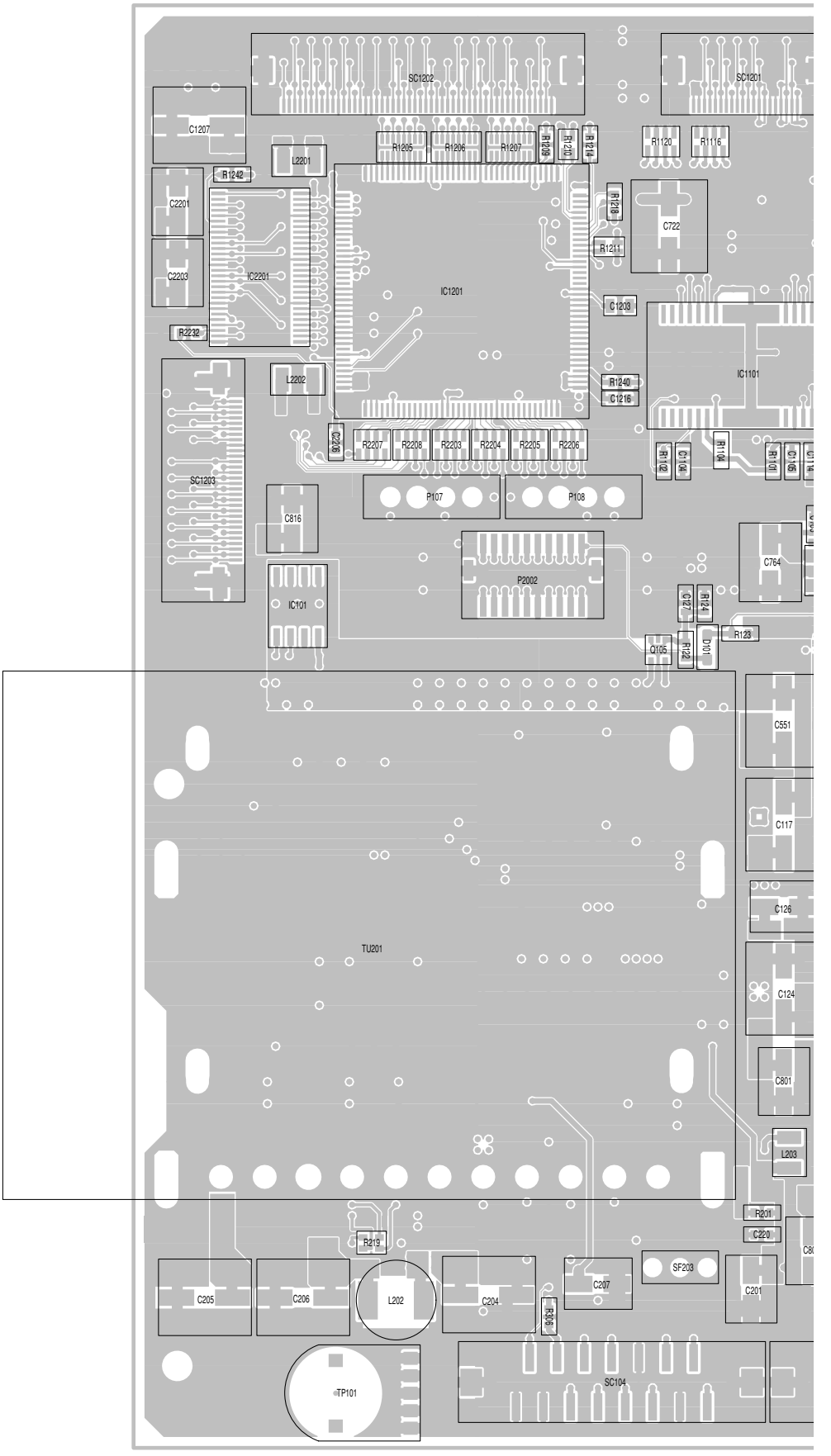
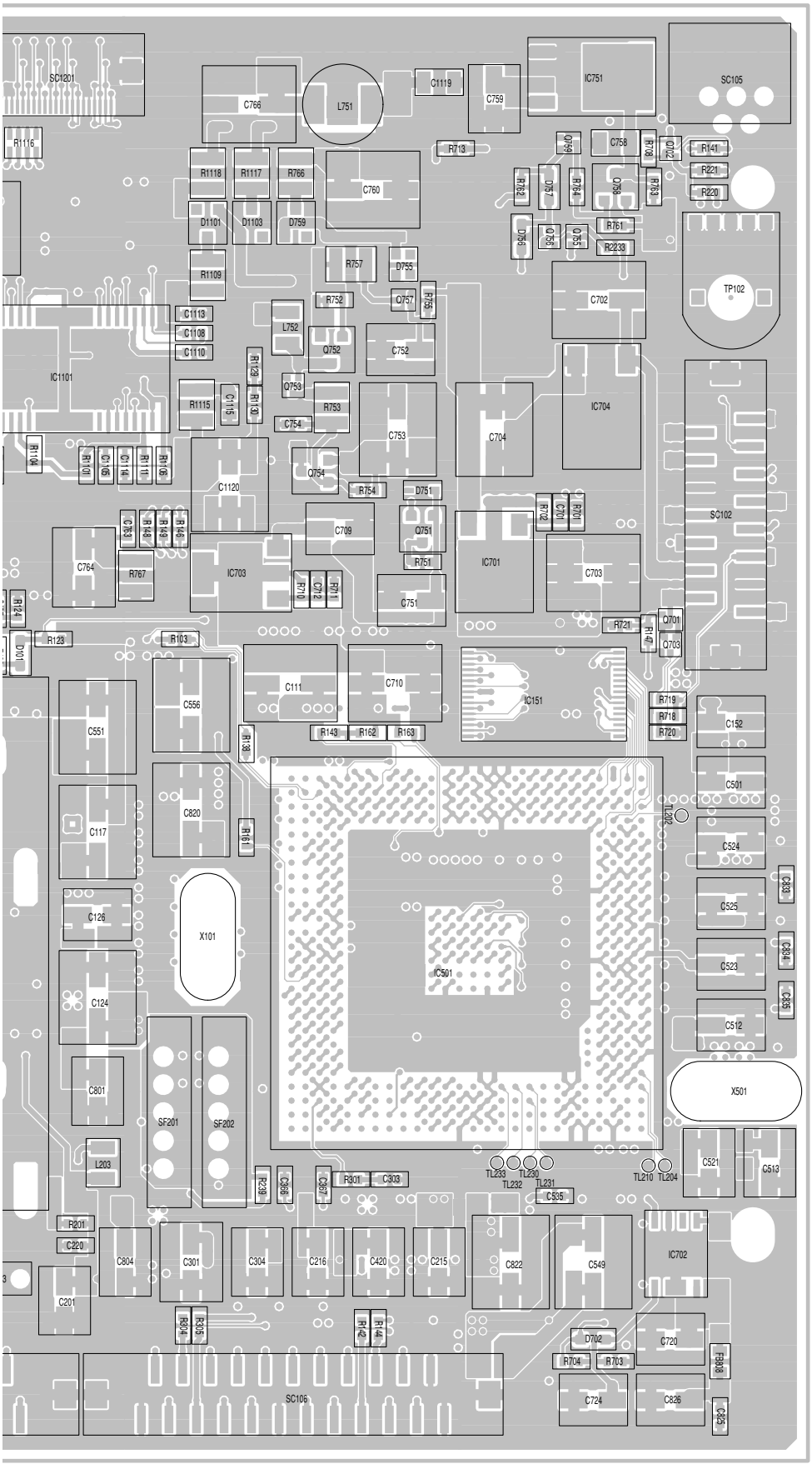


MAIN Unit (Chip Parts Side-A)



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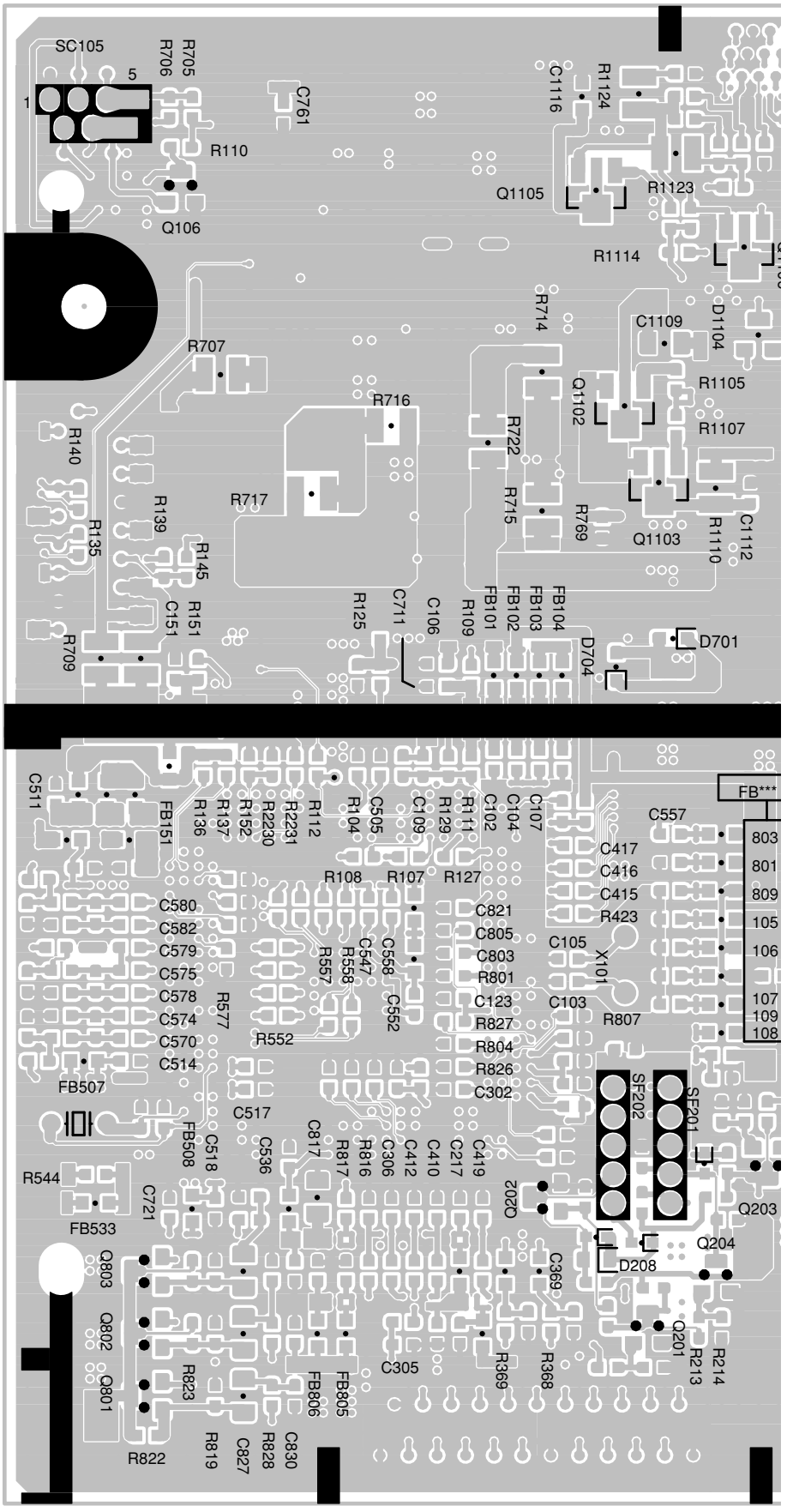
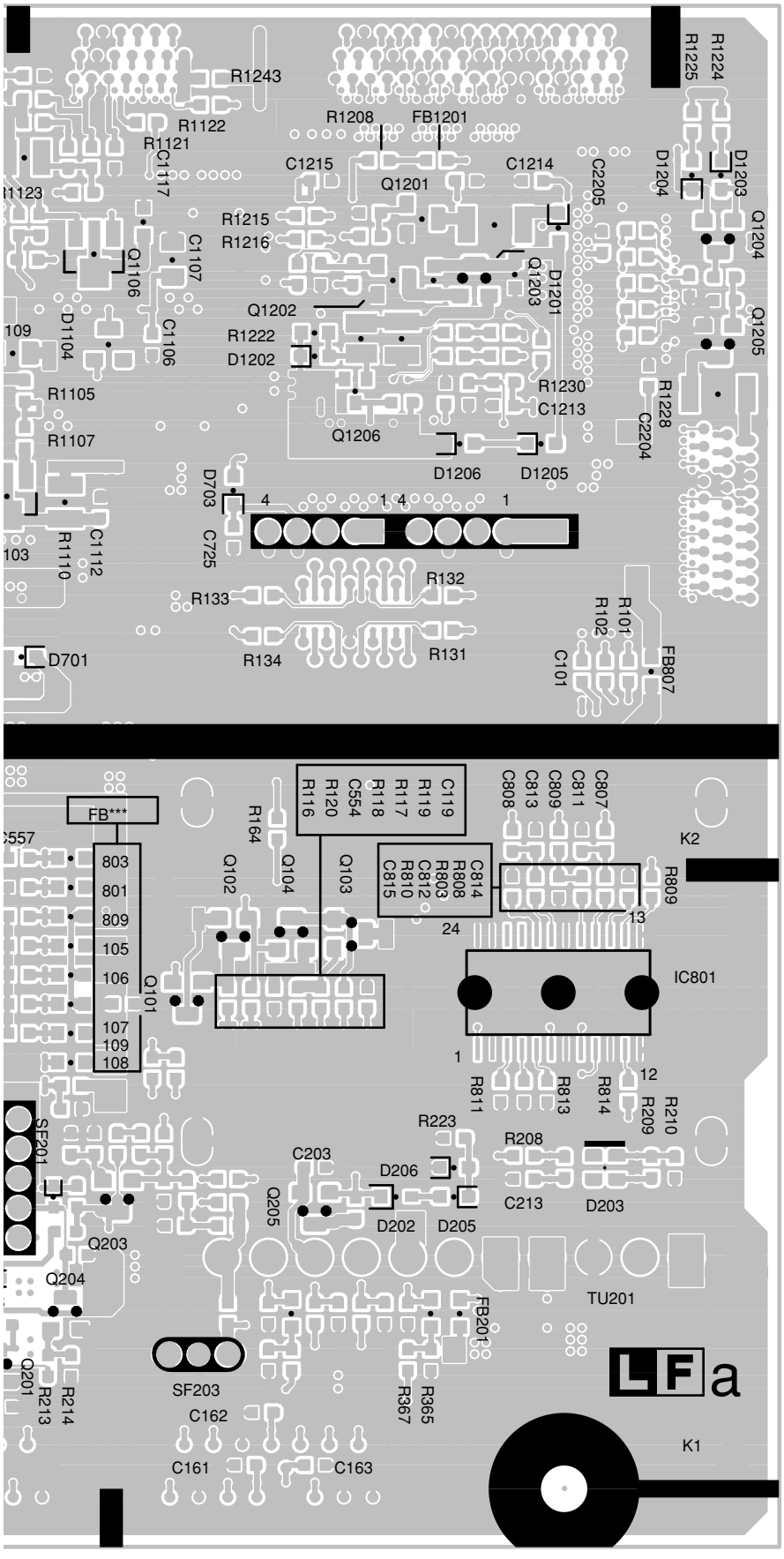


MAIN Unit (Side-B)



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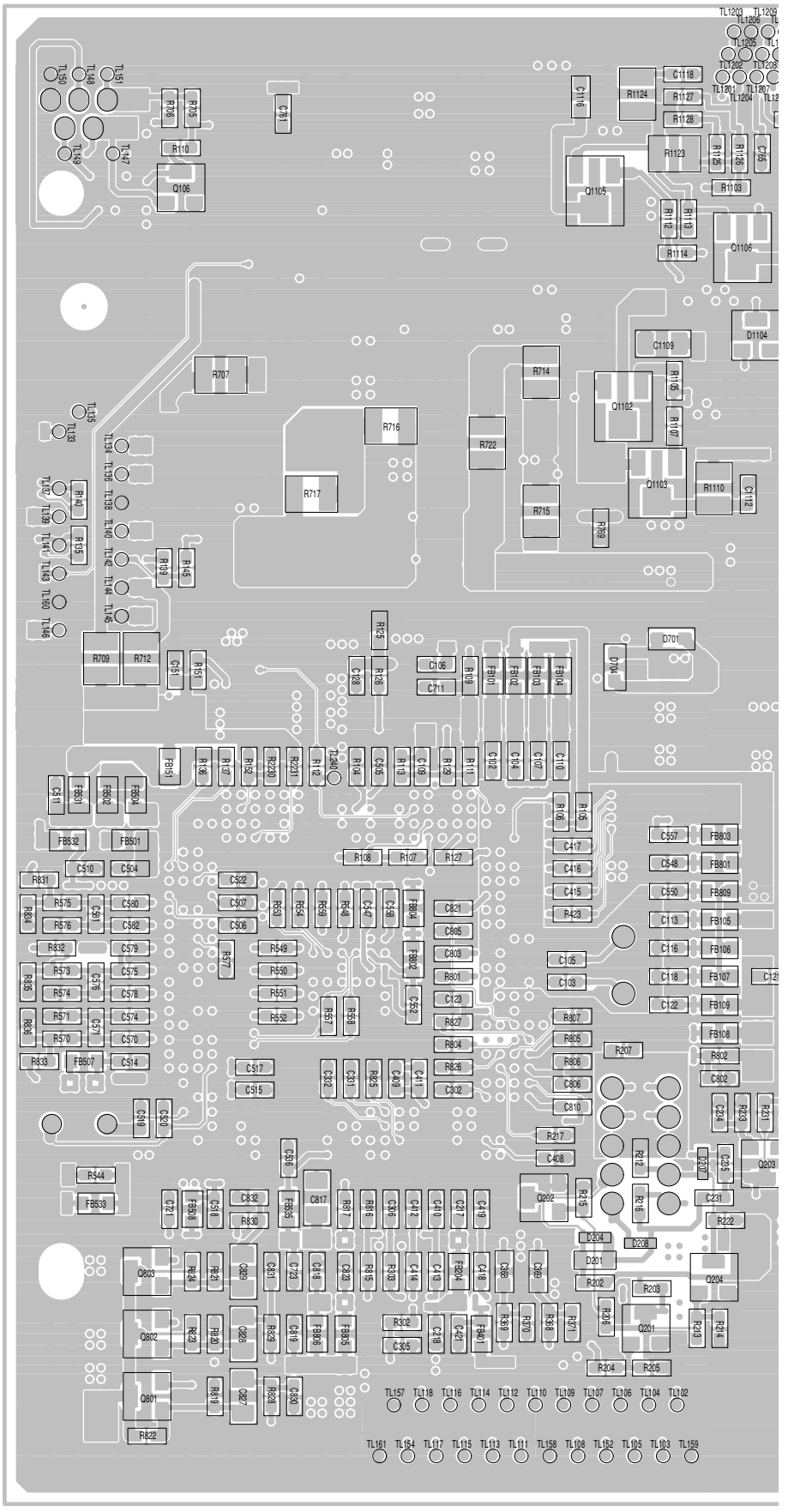
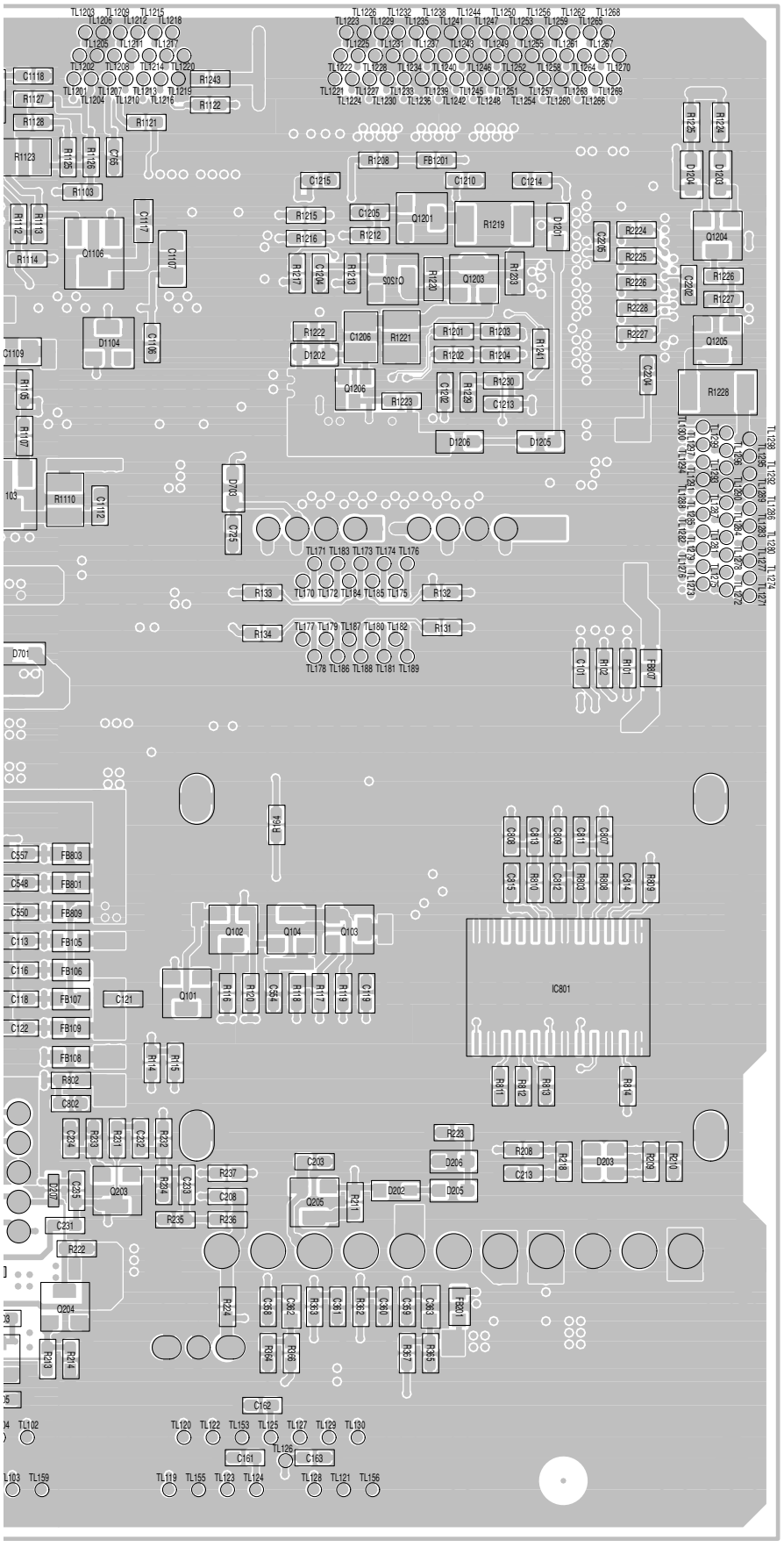


MAIN Unit (Chip Parts Side-B)



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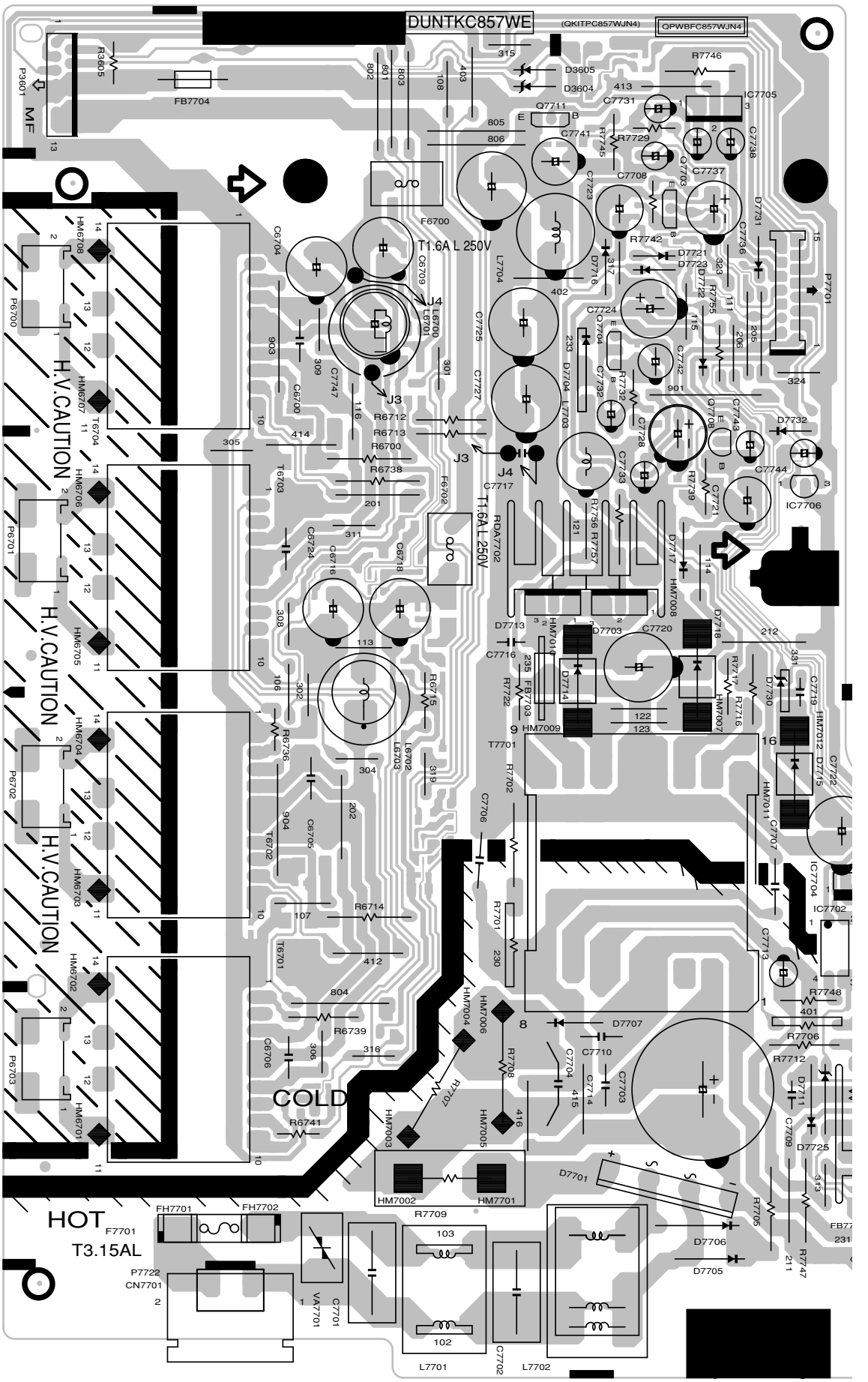
DUNTKC857WE
(QKITPC857WJN4)
QPWBFC857WJN4
H.V.CAUTION
H.V.CAUTION
H.V.CAUTION
COLD
HOT
T1.6A L 250V
T1.6A L 250V
T3.15AL
F7701
P3601
MF
R3605
FB7704
F6700
J4
J3
J3
J4
F6702
RDA7702
T7701
T6704
T6703
T6702
T6701
P6700
P6701
P6702
P6703
HM6708
HM6707
HM6706
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HM6704
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HM7002
HM7003
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HM7005
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HM7007
HM7008
HM7009
HM7010
HM7011
HM7012
IC7705
IC7706
IC7704
IC7702
FH7701
FH7702
P7722
CN7701
VA7701
C7701
C7702
L7701
L7702
D7701
D7705
D7706
P7701
D3605
D3604
Q7711
F6704
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D7704
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D7717
D7703
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D7732
D7721
D7723
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D7711
D7715
D7718
D7716
D7714
D7713
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R7745
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C7705
R7710
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R6711
R6710
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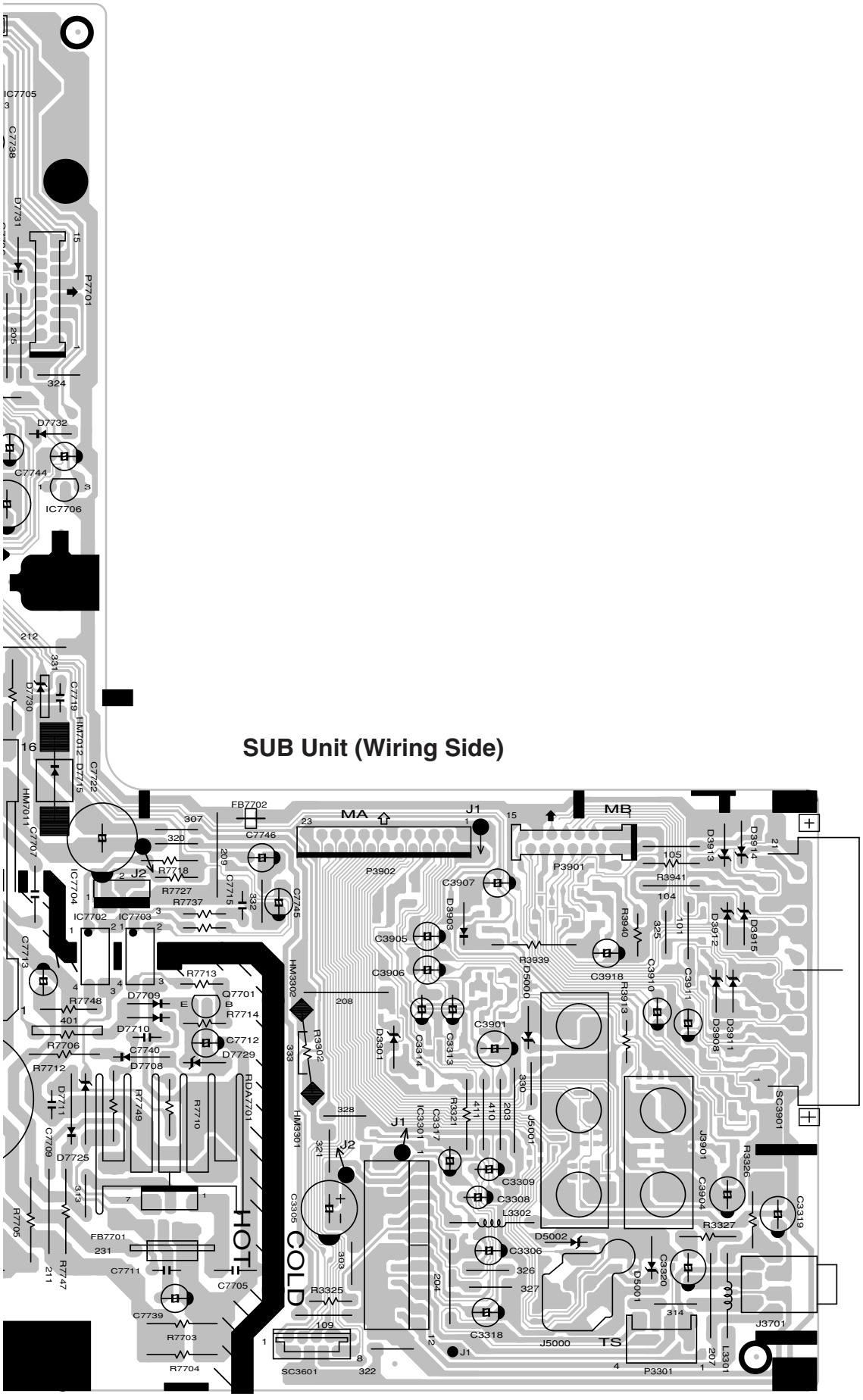
R6706
R6705
R6704
R6703
R6702
R6701
R6700

SUB Unit (Wiring Side)



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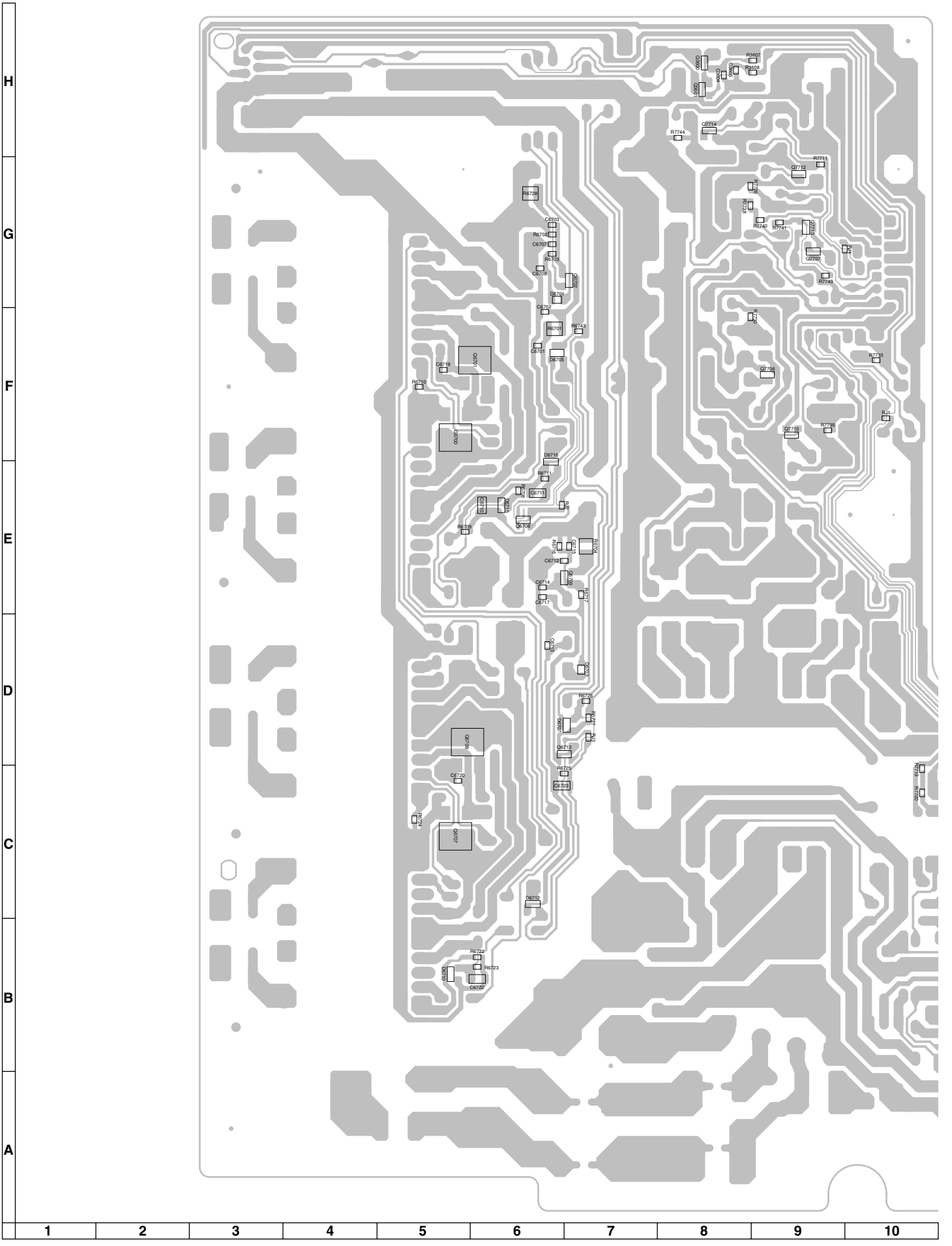
H
G
F
E
D
C
B
A
1
2
3
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7
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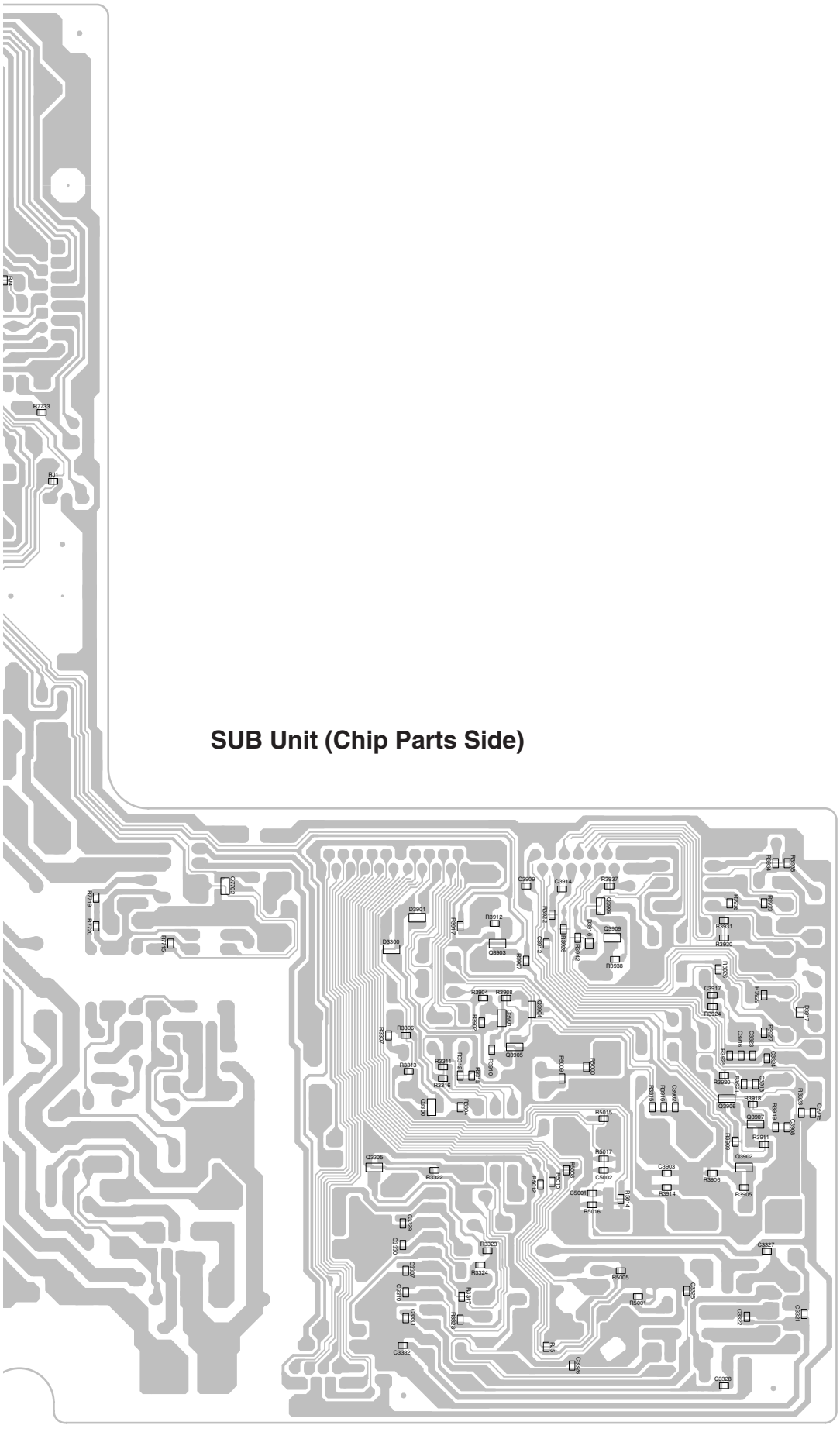
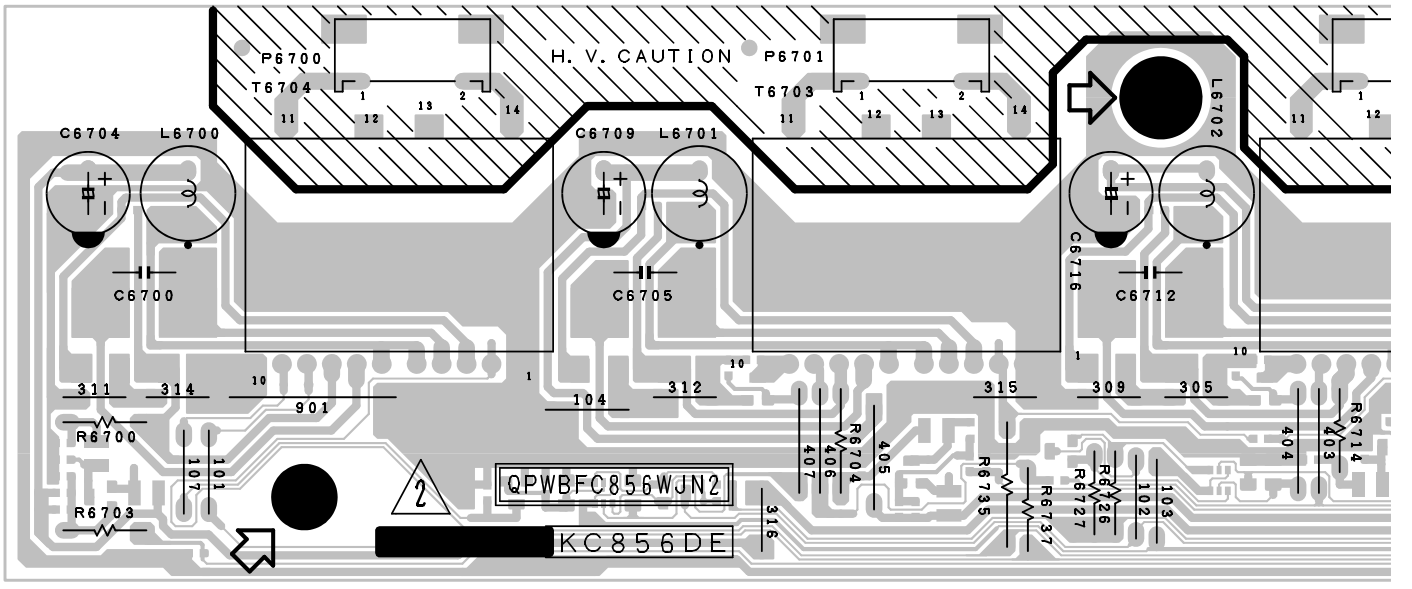
9
10

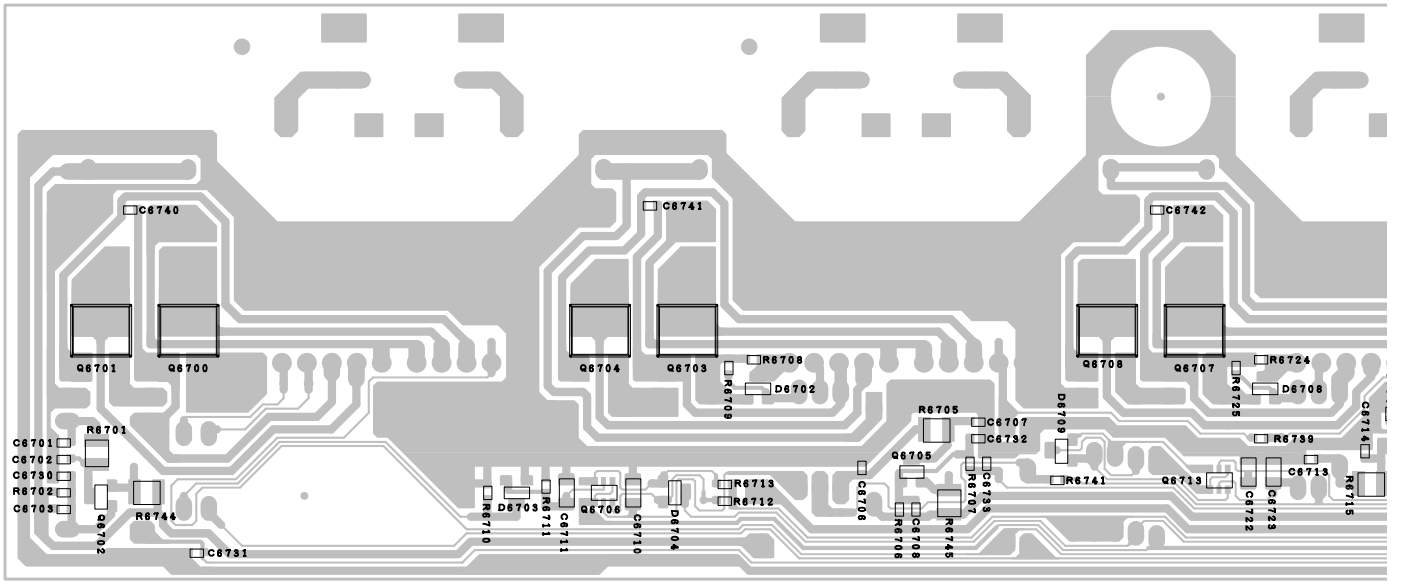
SUB Unit (Chip Parts Side)



10	11	12	13	14	15	16	17	18	19

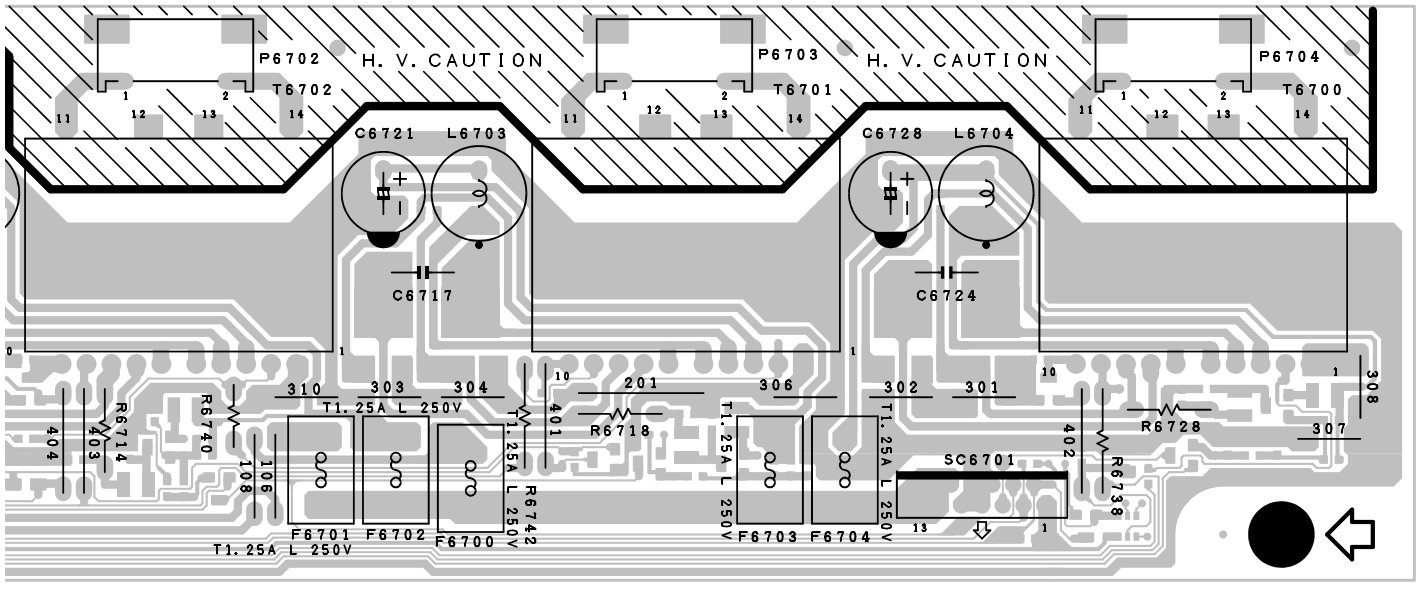


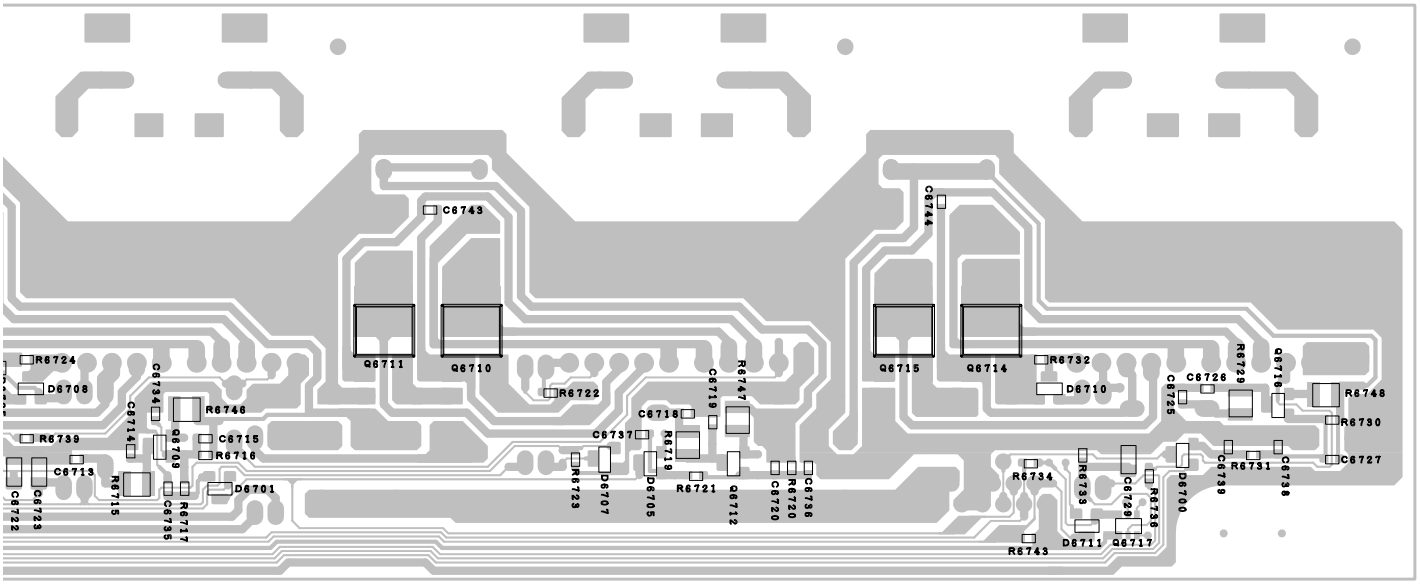
INVERTER Unit (Wiring Side)



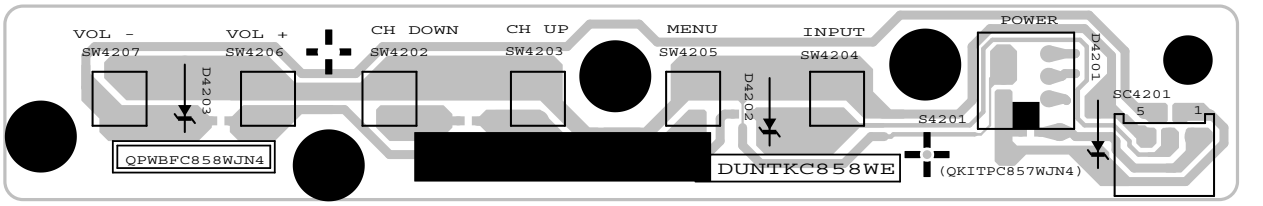
INVERTER Unit (Chip Parts Side)

1	2	3	4	5	6	7	8	9	10

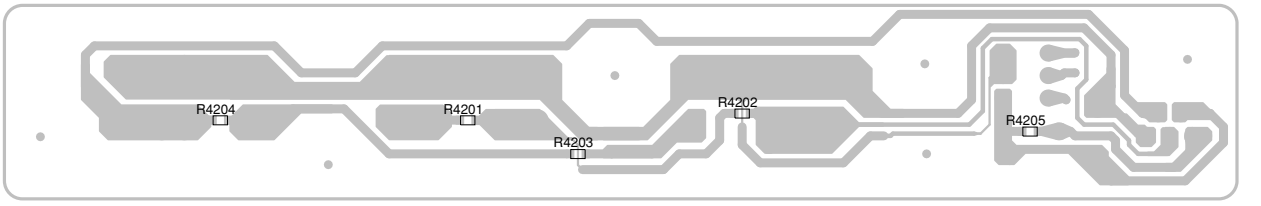




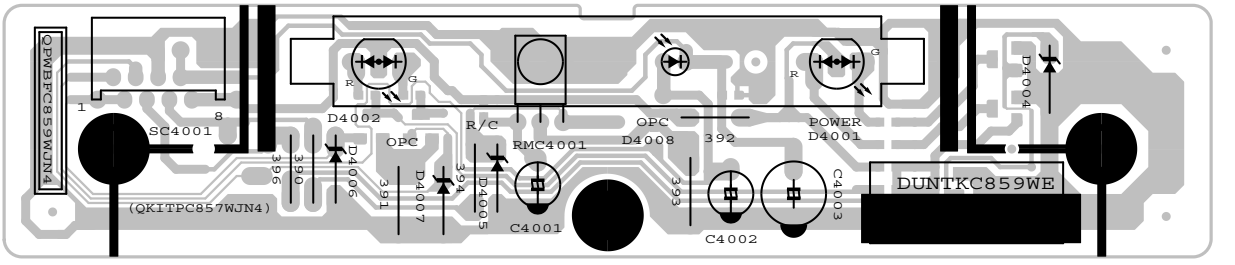
10	11	12	13	14	15	16	17	18	19



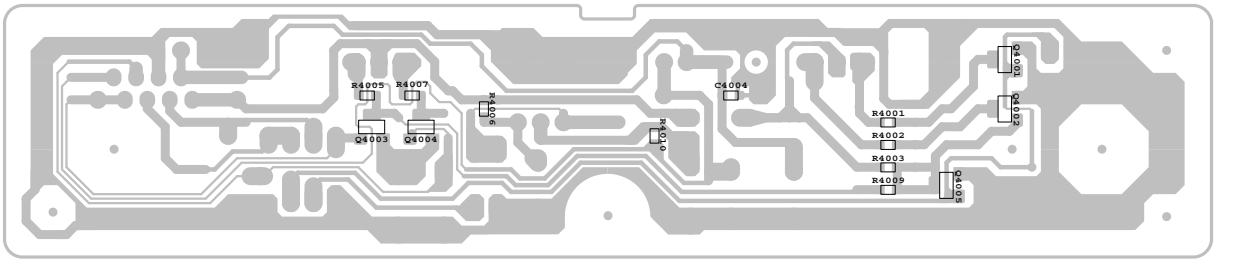
OPERATION Unit (Wiring Side)



OPERATION Unit (Chip Parts Side)



R/C, LED Unit (Wiring Side)



R/C, LED Unit (Chip Parts Side)

1	2	3	4	5	6

PARTS LIST

PARTS REPLACEMENT

Replacement parts which have these special safety characteristics identified in this manual; electrical components having such features are identified by ⚠ and shaded areas in the Replacement Parts Lists and Schematic Diagrams. The use of a substitute replacement part which does no have the same safety characteristic as the factory recommended replacement parts shown in this service manual may create shock, fire or other hazards.

"HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following informations.

1. MODEL NUMBER
2. REF. NO.
3. PART NO.
4. DESCRIPTION

★ MARK: SPARE PARTS-DELIVERY SECTION

Ref. No.	Part No.	★	Description	Code

PRINTED WIRING BOARD ASSEMBLIES
(NOT REPLACEMENT ITEM)

DUNTKC856FM01	–	INVERTER Unit	—
DUNTKC857WE04	–	SUB Unit	—
DUNTKC858WE04	–	OPERATION Unit	—
DUNTKC859WE04	–	R/C, LED Unit	—
DUNTKC860FM03	–	MAIN Unit	—

LCD PANEL

NOTE: THE PARTS HERE SHOWN ARE SUPPLIED AS AN ASSEMBLY BUT NOT INDEPENDENTLY.

RLCDTA025WJZZ	J	20" LCD Panel Unit	DB

DUNTKC856FM01
INVERTER UNIT

TRANSISTORS

Q6700	VS2SC5886A+-1Y	J	2SC5886A	AD
Q6701	VS2SC5886A+-1Y	J	2SC5886A	AD
Q6702	VS2SA1530AR-1Y	J	2SA1530AR	AB
Q6703	VS2SC5886A+-1Y	J	2SC5886A	AD
Q6704	VS2SC5886A+-1Y	J	2SC5886A	AD
Q6705	VS2SA1530AR-1Y	J	2SA1530AR	AB
Q6706	VSUPA606T//-1Y	J	UPA606T	AD
Q6707	VS2SC5886A+-1Y	J	2SC5886A	AD
Q6708	VS2SC5886A+-1Y	J	2SC5886A	AD
Q6709	VS2SA1530AR-1Y	J	2SA1530AR	AB
Q6710	VS2SC5886A+-1Y	J	2SC5886A	AD
Q6711	VS2SC5886A+-1Y	J	2SC5886A	AD
Q6712	VS2SA1530AR-1Y	J	2SA1530AR	AB
Q6713	VSUPA606T//-1Y	J	UPA606T	AD
Q6714	VS2SC5886A+-1Y	J	2SC5886A	AD
Q6715	VS2SC5886A+-1Y	J	2SC5886A	AD
Q6716	VS2SA1530AR-1Y	J	2SA1530AR	AB
Q6717	VSUPA606T//-1Y	J	UPA606T	AD

DIODES

D6700	VHDDAN202K/-1Y	J	Diode	AB
D6701	VHDDAN202K/-1Y	J	Diode	AB
D6702	VHDMA157A//-1Y	J	Diode	AC
D6703	VHDMA157A//-1Y	J	Diode	AC
D6704	VHDDAN202K/-1Y	J	Diode	AB
D6705	VHDDAN202K/-1Y	J	Diode	AB
D6707	VHDMA157A//-1Y	J	Diode	AC
D6708	VHDMA157A//-1Y	J	Diode	AC
D6709	VHDDAN202K/-1Y	J	Diode	AB
D6710	VHDMA157A//-1Y	J	Diode	AC
D6711	VHDDAN202K/-1Y	J	Diode	AB

COILS

L6700	RCiLPA373WJZZ	J	Coil	AC
L6701	RCiLPA373WJZZ	J	Coil	AC
L6702	RCiLPA373WJZZ	J	Coil	AC
L6703	RCiLPA373WJZZ	J	Coil	AC
L6704	RCiLPA373WJZZ	J	Coil	AC

TRANSFORMERS

T6700	RTRNZA075WJZZ	S	Transformer
T6701	RTRNZA075WJZZ	S	Transformer
T6702	RTRNZA075WJZZ	S	Transformer
T6703	RTRNZA075WJZZ	S	Transformer
T6704	RTRNZA075WJZZ	S	Transformer

CAPACITORS

C6700	RC-FZA116WJZZ	S	0.27	250V	Film	
C6703	VCKYCY1CB683KY	J	0.068	16V	Ceramic	AC
C6704	RC-EZA465WJZZ	J	1000	16V	Electrolytic	AE
C6705	RC-FZA116WJZZ	S	0.27	250V	Film	
C6708	VCKYCY1CB683KY	J	0.068	16V	Ceramic	AC
C6709	RC-EZA465WJZZ	J	1000	16V	Electrolytic	AE
C6710	RC-KZ0072TAZZY	J	1	25V	Ceramic	AC
C6711	RC-KZ0072TAZZY	J	1	25V	Ceramic	AC
C6712	RC-FZA116WJZZ	S	0.27	250V	Film	
C6715	VCKYCY1CB683KY	J	0.068	16V	Ceramic	AC
C6716	RC-EZA465WJZZ	J	1000	16V	Electrolytic	AE
C6717	RC-FZA116WJZZ	J	0.27	250V	Film	
C6720	VCKYCY1CB333KY	J	0.033	16V	Ceramic	AA
C6721	RC-EZA465WJZZ	J	1000	16V	Electrolytic	AE
C6722	RC-KZ0072TAZZY	J	1	25V	Ceramic	AC
C6723	RC-KZ0072TAZZY	J	1	25V	Ceramic	AC
C6724	RC-FZA116WJZZ	S	0.27	250V	Film	
C6727	VCKYCY1CB333KY	J	0.033	16V	Ceramic	AA
C6728	RC-EZA465WJZZ	J	1000	16V	Electrolytic	AE
C6729	RC-KZ0072TAZZY	J	1	25V	Ceramic	AC

RESISTORS

R6700	VRD-RA2EE182JY	J	1.8k	1/4W	Carbon	AA
R6701	VRS-TW2ED122JY	J	1.2k	1/4W	Metal Oxide	AA
R6702	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R6703	VRD-RA2BE333JY	J	33k	1/8W	Carbon	AA
R6704	VRD-RA2EE182JY	J	1.8k	1/4W	Carbon	AA
R6705	VRS-TW2ED122JY	J	1.2k	1/4W	Metal Oxide	AA
R6706	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R6707	VRS-CY1JF333JY	J	33k	1/16W	Metal Oxide	AA
R6708	VRS-CY1JF471JY	J	470	1/16W	Metal Oxide	AA
R6709	VRS-CY1JF824JY	J	820k	1/16W	Metal Oxide	AA
R6710	VRS-CY1JF471JY	J	470	1/16W	Metal Oxide	AA
R6711	VRS-CY1JF824JY	J	820k	1/16W	Metal Oxide	AA
R6712	VRS-CY1JF562JY	J	5.6k	1/16W	Metal Oxide	AA
R6713	VRS-CY1JF562JY	J	5.6k	1/16W	Metal Oxide	AA
R6714	VRD-RA2EE182JY	J	1.8k	1/4W	Carbon	AA
R6715	VRS-TW2ED122JY	J	1.2k	1/4W	Metal Oxide	AA
R6716	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R6717	VRS-CY1JF333JY	J	33k	1/16W	Metal Oxide	AA
R6718	VRD-RA2EE182JY	J	1.8k	1/4W	Carbon	AA
R6719	VRS-TW2ED122JY	J	1.2k	1/4W	Metal Oxide	AA
R6720	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R6721	VRS-CY1JF333JY	J	33k	1/16W	Metal Oxide	AA
R6722	VRS-CY1JF471JY	J	470	1/16W	Metal Oxide	AA
R6723	VRS-CY1JF824JY	J	820k	1/16W	Metal Oxide	AA
R6724	VRS-CY1JF471JY	J	470	1/16W	Metal Oxide	AA
R6725	VRS-CY1JF824JY	J	820k	1/16W	Metal Oxide	AA
R6726	VRD-RA2BE562JY	J	5.6k	1/8W	Carbon	AA
R6727	VRD-RA2BE562JY	J	5.6k	1/8W	Carbon	AA

Ref. No.	Part No.	★	Description	Code

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INVERTER UNIT (Continued)

R6728	VRD-RA2EE182JY	J	1.8k	1/4W	Carbon	AA
R6729	VRS-TW2ED122JY	J	1.2k	1/4W	Metal Oxide	AA
R6730	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R6731	VRS-CY1JF333JY	J	33k	1/16W	Metal Oxide	AA
R6732	VRS-CY1JF471JY	J	470	1/16W	Metal Oxide	AA
R6733	VRS-CY1JF824JY	J	820k	1/16W	Metal Oxide	AA
R6734	VRS-CY1JF562JY	J	5.6k	1/16W	Metal Oxide	AA
R6743	VRS-CY1JF563JY	J	56k	1/16W	Metal Oxide	AA
R6744	VRS-TW2ED561JY	J	560	1/4W	Metal Oxide	AA
R6745	VRS-TW2ED561JY	J	560	1/4W	Metal Oxide	AA
R6746	VRS-TW2ED561JY	J	560	1/4W	Metal Oxide	AA
R6747	VRS-TW2ED561JY	J	560	1/4W	Metal Oxide	AA
R6748	VRS-TW2ED561JY	J	560	1/4W	Metal Oxide	AA

MISCELLANEOUS PARTS

⚠ F6700	QFS-ZA002WJZZ	J	Fuse, 1.25A/250V		AD
⚠ F6701	QFS-ZA002WJZZ	J	Fuse, 1.25A/250V		AD
⚠ F6702	QFS-ZA002WJZZ	J	Fuse, 1.25A/250V		AD
⚠ F6703	QFS-ZA002WJZZ	J	Fuse, 1.25A/250V		AD
⚠ F6704	QFS-ZA002WJZZ	J	Fuse, 1.25A/250V		AD
P6700	QPLGNA391WJZZ	J	Plug, 2-pin		AD
P6701	QPLGNA391WJZZ	J	Plug, 2-pin		AD
P6702	QPLGNA391WJZZ	J	Plug, 2-pin		AD
P6703	QPLGNA391WJZZ	J	Plug, 2-pin		AD
P6704	QPLGNA391WJZZ	J	Plug, 2-pin		AD
SC6701	QSOCZ1338CEZZ	J	Socket, 13-pin		AD

Ref. No.	Part No.	★	Description	Code

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SUB UNIT

INTEGRATED CIRCUITS

IC3301	VHiAN17821A-1	J	AN17821A	AH
IC7701	VHiSTRW67652E	J	I.C.	AL
⚠ IC7702	RH-FXA003WJZZ	J	PC123Y82	AD
⚠ IC7703	RH-FXA003WJZZ	J	PC123Y82	AD
IC7704	VHiSE005N++-F	S	I.C.	AF
IC7705	VHiKA7809AP-1	J	KIA7809API	AE
IC7706	VHiPQ050ES1-1+	J	PQ050ES1MXP	AE

TRANSISTORS

Q3305	VS2SC3928AR-1Y	J	2SC3928AR	AB
Q3600	VSKRC102S//-1Y	J	KRC102S	AA
Q3601	VSKRC102S//-1Y	J	KRC102S	AA
Q3901	VS2SA1530AR-1Y	J	2SA1530AR	AB
Q3902	VS2SA1530AR-1Y	J	2SA1530AR	AB
Q3903	VS2SC3928AR-1Y	J	2SC3928AR	AB
Q3904	VS2SD1306-E-1Y	J	2SD1306-E	AC
Q3905	VS2SD1306-E-1Y	J	2SD1306-E	AC
Q3906	VS2SD1306-E-1Y	J	2SD1306-E	AC
Q3907	VS2SD1306-E-1Y	J	2SD1306-E	AC
Q3908	VS2SA1530AR-1Y	J	2SA1530AR	AB
Q3909	VS2SC3928AR-1Y	J	2SC3928AR	AB
Q7701	VS2SA1013//1E+	J	2SA1013	AD
Q7702	VSKRC104S//-1Y	J	KRC104S	AA
Q7703	VS2SB1443TV1E+	J	2SB1443TV	AE
Q7704	VS2SB1443TV1E+	J	2SB1443TV	AE
Q7706	VSKRC101S//-1Y	S	KRC101S	AA
Q7707	VSKRC104S//-1Y	J	KRC104S	AA
Q7708	VS2SC2235Y/1E+	J	2SC2235Y	AE
Q7710	VSKRA102S//-1Y	J	KRA102S	AA
Q7711	VS2SB1443TV1E+	J	2SB1443TV	AE
Q7712	VSKRC104S//-1Y	J	KRC104S	AA
Q7713	VS2SA1530AR-1Y	J	2SA1530AR	AB
Q7714	VSKRC102S//-1Y	J	KRA102S	AA

DIODES

D3300	VHDDAN202K/-1Y	J	Diode	AB
D3604	RH-EX0652GEZZY	J	Zener Diode, 18V	AB
D3605	RH-EX0652GEZZY	J	Zener Diode, 18V	AB
D3901	VHDDAN202K/-1Y	J	Diode	AB
D3903	VHD1SS119//-1Y	J	Diode	AA
D3908	RH-EX0630GEZZY	J	Zener Diode, 9.1V	AA
D3911	RH-EX0630GEZZY	J	Zener Diode, 9.1V	AA
D3912	RH-EX0630GEZZY	J	Zener Diode, 9.1V	AA
D3913	RH-EX0630GEZZY	J	Zener Diode, 9.1V	AA
D3914	RH-EX0630GEZZY	J	Zener Diode, 9.1V	AA
D3915	RH-EX0630GEZZY	J	Zener Diode, 9.1V	AA
D3916	RH-EX0612GEZZY	J	Zener Diode	AB
D3917	RH-EX1244CEZZY	J	Zener Diode	AB
D5000	RH-EX0630GEZZY	J	Zener Diode, 9.1V	AA
D5001	RH-EX0630GEZZY	J	Zener Diode, 9.1V	AA
D5002	RH-EX0630GEZZY	J	Zener Diode, 9.1V	AA
D7701	RH-DX0476CEZZ	J	Diode	AG
D7703	VHDSF30JC6+1E	S	Diode	AG
D7705	RH-DX0490CEZZY	J	Diode	AC
D7706	RH-DX0490CEZZY	J	Diode	AC
D7707	RH-DX0321CEZZY	J	Diode	AC
D7708	RH-DX0066GEZZY	J	Diode	AC
D7709	VHD1SS244//-1Y	J	Diode	AB
D7710	VHD1SS244//-1Y	J	Diode	AB
D7711	VHD1SS244//-1Y	J	Diode	AB
D7713	VHDSF30JC6+1E	S	Diode	AG
D7714	RH-DXA059WJZZ	S	Diode	AD
D7715	RH-DX0461CEZZ	J	Diode	AG
D7716	VHD10ELS4//-1Y	J	Diode	AD
D7717	VHD10ELS4//-1Y	J	Diode	AD
D7718	RH-DXA059WJZZ	S	Diode	AD
D7721	VHD1SS119//-1Y	J	Diode	AA
D7722	VHD1SS119//-1Y	J	Diode	AA
D7723	VHD1SS119//-1Y	J	Diode	AA
D7725	RH-EX0618GEZZY	J	Zener Diode, 6.2V	AB

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Ref. No.	Part No.	★	Description	Code
D7729	RH-EX0640GEZZY	J	Zener Diode	AA
D7731	VHD1SS119//-1Y	J	Diode	AA
D7732	VHD1SS119//-1Y	J	Diode	AA
⚠ VA7701	RH-VXA022WJZZ	J	Varistor	AD

COILS

Ref. No.	Part No.	★	Description	Code
L3301	VP-CF3R3K0000Y	J	Peaking 3.3µH	AC
L3302	VP-CF3R3K0000Y	J	Peaking 3.3µH	AC
⚠ L7701	RCiLFA161WJZZ	S	Coil	AD
⚠ L7702	RCiLFA162WJZZ	S	Coil	AD
L7703	RCiLP0175CEZZ+	J	Coil	AD
L7704	RCiLPA308WJZZ	S	Coil	AD

TRANSFORMER

Ref. No.	Part No.	★	Description	Code
⚠ T7701	RTRNWA152WJZZ	S	Transformer	AL

CAPACITORS

Ref. No.	Part No.	★				Code
C3305	VCEA0A1CW108M+	J	1000	16V	Electrolytic	AD
C3306	VCEAEA1CW106M+	J	10	16V	Electrolytic	AB
C3307	VCKYCY1HB102KY	J	1000p	50V	Ceramic	AA
C3308	VCEAEA1HW105M+	J	1	50V	Electrolytic	AB
C3309	VCEAEA1HW105M+	J	1	50V	Electrolytic	AB
C3310	VCKYCY1HB102KY	J	1000p	50V	Ceramic	AA
C3313	VCEAEA1HW225M+	J	2.2	50V	Electrolytic	AB
C3314	VCEAEA1HW225M+	J	2.2	50V	Electrolytic	AB
C3317	VCEAEA1HW225M+	J	2.2	50V	Electrolytic	AB
C3318	VCEAEA1CW106M+	J	10	16V	Electrolytic	AB
C3319	VCEAEA1CW476M+	J	47	16V	Electrolytic	AB
C3320	VCEAEA1CW476M+	J	47	16V	Electrolytic	AB
C3321	VCKYCY1HB102KY	J	1000p	50V	Ceramic	AA
C3322	VCKYCY1HB102KY	J	1000p	50V	Ceramic	AA
C3323	VCKYCY1HB102KY	J	1000p	50V	Ceramic	AA
C3324	VCKYCY1HB102KY	J	1000p	50V	Ceramic	AA
C3325	VCKYCY1CF104ZY	J	0.1	16V	Ceramic	AA
C3326	VCKYCY1CF104ZY	J	0.1	16V	Ceramic	AA
C3327	VCCCCY1HH221JY	J	220p	50V	Ceramic	AA
C3328	VCCCCY1HH221JY	J	220p	50V	Ceramic	AA
C3604	VCKYCY1HB332KY	J	3300p	50V	Ceramic	AA
C3605	VCKYCY1HB332KY	J	3300p	50V	Ceramic	AA
C3901	VCEAEA0JW107M+	J	100	6.3V	Electrolytic	AB
C3902	VCCCCY1HH101JY	J	100p	50V	Ceramic	AA
C3903	VCCCCY1HH101JY	J	100p	50V	Ceramic	AA
C3904	VCEAEA1CW476M+	J	47	16V	Electrolytic	AB
C3905	VCEAEA1CW106M+	J	10	16V	Electrolytic	AB
C3906	VCEAEA1CW106M+	J	10	16V	Electrolytic	AB
C3907	VCEAEA0JW476M+	J	47	6.3V	Electrolytic	AB
C3908	VCCCCY1HH101JY	J	100p	50V	Ceramic	AA
C3909	VCCCCY1HH331JY	J	330p	50V	Ceramic	AA
C3910	VCEAEA1CW106M+	J	10	16V	Electrolytic	AB
C3911	VCEAEA1CW106M+	J	10	16V	Electrolytic	AB
C3912	VCCCCY1HH331JY	J	330p	50V	Ceramic	AA
C3913	VCCCCY1HH101JY	J	100p	50V	Ceramic	AA
C3914	VCCCCY1HH221JY	J	220p	50V	Ceramic	AA
C3915	VCCCCY1HH101JY	J	100p	50V	Ceramic	AA
C3916	VCCCCY1HH101JY	J	100p	50V	Ceramic	AA
C3917	VCCCCY1HH221JY	J	220p	50V	Ceramic	AA
C3918	VCEAEA1CW106M+	J	10	16V	Electrolytic	AB
C5001	VCCCCY1HH101JY	J	100p	50V	Ceramic	AA
C5002	VCCCCY1HH101JY	J	100p	50V	Ceramic	AA
⚠ C7701	RC-FZA022WJZZ	J	0.22	275V	Film	AD
⚠ C7702	RC-FZA022WJZZ	J	0.22	275V	Film	AD
C7703	RC-EZA556WJZZ	J	150	400V	Electrolytic	AN
C7704	RC-FZA180WJZZ	S	0.1	580V	Film	AC
C7705	RC-KZA305WJZZ	S	560p	2kV	Ceramic	AB
⚠ C7706	RC-KZ0105GEZZ	J	2200p	250V	Ceramic	AD
⚠ C7707	RC-KZ0103GEZZ	J	1000p	250V	Ceramic	AD
C7708	VCEA4A1CN226M+	S	22	16V	Electrolytic	AB
C7709	VCQYTA1HM152J+	J	1500p	50V	Mylar	AA
C7711	VCKYPA1HB471K+	J	470p	50V	Ceramic	AA
C7712	VCEA4A1VN476M+	S	47	35V	Electrolytic	AB
C7713	VCEA4A1VN106M+	S	10	35V	Electrolytic	AB
C7715	VCQYTA1HM104J+	J	0.1	50V	Mylar	AB
C7720	RC-EZA155WJZZ	J	2200	10V	Electrolytic	AE
C7721	RC-EZA168WJZZ+	S	220	25V	Electrolytic	AB
C7722	RC-EZA172WJZZ	J	1000	25V	Electrolytic	AE
C7723	RC-EZA184WJZZ+	J	100	50V	Electrolytic	AD
C7724	VCEA4A1AN108M	J	1000	10V	Electrolytic	AD
C7725	RC-EZA173WJZZ	J	1500	25V	Electrolytic	AF
C7727	RC-EZA173WJZZ	J	1500	25V	Electrolytic	AF
C7728	RC-EZA153WJZZ+	J	470	10V	Electrolytic	AD
C7729	RC-EZA172WJZZ	J	1000	25V	Electrolytic	AE
C7731	VCEA4A1CN226M+	S	22	16V	Electrolytic	AB
C7732	VCEA4A1AN227M+	J	220	10V	Electrolytic	AC
C7733	VCEA4A1CN226M+	S	22	16V	Electrolytic	AB
C7736	VCEA0A1HW227M+	J	220	50V	Electrolytic	AB
C7737	VCEA4A1CN107M+	J	100	16V	Electrolytic	AB
C7738	VCEA4A1CN107M+	J	100	16V	Electrolytic	AB
C7739	VCEA4A1HN225M+	J	2.2	50V	Electrolytic	AC
C7740	VCQYTA1HM104J+	J	0.1	50V	Mylar	AB
C7741	VCEA0A1EW227M+	J	220	25V	Electrolytic	AB
C7742	VCEA0A1AW227M+	J	220	10V	Electrolytic	AB
C7743	VCEA4A1CN106M+	J	10	16V	Electrolytic	AC
C7744	VCEA4A1CN106M+	J	10	16V	Electrolytic	AC
C7747	RC-EZA173WJZZ	J	1500	25V	Electrolytic	AF

RESISTORS

Ref. No.	Part No.	★				Code
RJ1	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
RJ2	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
RJ3	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
RJ5	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R3302	VRN-VV3DB1R0J	J	1	2W	Metal Film	AB
R3304	VRS-CY1JF153JY	J	15k	1/16W	Metal Oxide	AA
R3311	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R3312	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R3315	VRS-CY1JF681JY	J	680	1/16W	Metal Oxide	AA
R3316	VRS-CY1JF681JY	J	680	1/16W	Metal Oxide	AA
R3317	VRS-CY1JF124JY	J	120k	1/16W	Metal Oxide	AA
R3321	VRD-RA2BE272JY	J	2.7k	1/8W	Carbon	AA
R3322	VRS-CY1JF473JY	J	47k	1/16W	Metal Oxide	AA
R3323	VRS-CY1JF102JY	J	1k	1/16W	Metal Oxide	AA
R3324	VRS-CY1JF124JY	J	120k	1/16W	Metal Oxide	AA
R3325	VRD-RA2BE683JY	J	68k	1/8W	Carbon	AA
R3326	VRD-RM2HD151JY	J	150	1/2W	Carbon	AA
R3327	VRD-RM2HD151JY	J	150	1/2W	Carbon	AA
R3607	VRS-CY1JF153JY	J	15k	1/16W	Metal Oxide	AA
R3608	VRS-CY1JF153JY	J	15k	1/16W	Metal Oxide	AA
R3902	VRS-CY1JF104JY	J	100k	1/16W	Metal Oxide	AA
R3904	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R3905	VRS-CY1JF104JY	J	100k	1/16W	Metal Oxide	AA
R3906	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R3907	VRS-CY1JF472JY	J	4.7k	1/16W	Metal Oxide	AA
R3908	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R3909	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R3910	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R3911	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R3912	VRS-CY1JF102JY	J	1k	1/16W	Metal Oxide	AA
R3913	VRD-RA2BE271JY	J	270	1/8W	Carbon	AA
R3914	VRS-CY1JF104JY	J	100k	1/16W	Metal Oxide	AA
R3915	VRS-CY1JF271JY	J	270	1/16W	Metal Oxide	AA
R3916	VRS-CY1JF104JY	J	100k	1/16W	Metal Oxide	AA
R3917	VRS-CY1JF823JY	J	82k	1/16W	Metal Oxide	AA
R3918	VRS-CY1JF271JY	J	270	1/16W	Metal Oxide	AA
R3919	VRS-CY1JF104JY	J	100k	1/16W	Metal Oxide	AA
R3920	VRS-CY1JF271JY	J	270	1/16W	Metal Oxide	AA
R3921	VRS-CY1JF104JY	J	100k	1/16W	Metal Oxide	AA
R3922	VRS-CY1JF101JY	J	100	1/16W	Metal Oxide	AA
R3923	VRS-CY1JF473JY	J	47k	1/16W	Metal Oxide	AA
R3924	VRS-CY1JF101JY	J	100	1/16W	Metal Oxide	AA
R3925	VRS-CY1JF473JY	J	47k	1/16W	Metal Oxide	AA
R3926	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R3927	VRS-CY1JF750JY	J	75	1/16W	Metal Oxide	AA
R3928	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R3929	VRS-CY1JF750JY	J	75	1/16W	Metal Oxide	AA
R3930	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R3931	VRS-CY1JF750JY	J	75	1/16W	Metal Oxide	AA
R3933	VRS-CY1JF104JY	J	100k	1/16W	Metal Oxide	AA

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SUB UNIT (Continued)

Ref. No.	Part No.	★	Description			Code
R3934	VRS-CY1JF101JY	J	100	1/16W	Metal Oxide	AA
R3935	VRS-CY1JF750JY	J	75	1/16W	Metal Oxide	AA
R3936	VRS-CY1JF750JY	J	75	1/16W	Metal Oxide	AA
R3937	VRS-CY1JF101JY	J	100	1/16W	Metal Oxide	AA
R3938	VRS-CY1JF102JY	J	1k	1/16W	Metal Oxide	AA
R3939	VRD-RA2BE220JY	J	22	1/8W	Carbon	AA
R3940	VRD-RA2BE102JY	J	1k	1/8W	Carbon	AA
R3941	VRD-RA2BE750JY	J	75	1/8W	Carbon	AA
R3942	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R5000	VRS-CY1JF750JY	J	75	1/16W	Metal Oxide	AA
R5001	VRS-CY1JF750JY	J	75	1/16W	Metal Oxide	AA
R5005	VRS-CY1JF750JY	J	75	1/16W	Metal Oxide	AA
R5008	VRS-CY1JF101JY	J	100	1/16W	Metal Oxide	AA
R5009	VRS-CY1JF101JY	J	100	1/16W	Metal Oxide	AA
R5010	VRS-CY1JF101JY	J	100	1/16W	Metal Oxide	AA
R5012	VRS-CY1JF101JY	J	100	1/16W	Metal Oxide	AA
R5014	VRS-CY1JF101JY	J	100	1/16W	Metal Oxide	AA
R5015	VRS-CY1JF101JY	J	100	1/16W	Metal Oxide	AA
R5016	VRS-CY1JF473JY	J	47k	1/16W	Metal Oxide	AA
R5017	VRS-CY1JF473JY	J	47k	1/16W	Metal Oxide	AA
⚠ R7702	RR-HZ0014GEZZY	J	12M	1W	Coat-insulated fixed anti-surge	AE
R7703	VRN-VV3AB1R0J	J	1	1W	Metal Film	AA
R7704	VRN-VV3ABR82J	J	0.82	1W	Metal Film	AA
R7705	RR-DZA030WJZZ	S	330k	2W	Spesial Carbon Film	AB
R7706	VRD-RM2HD220JY	J	22	1/2W	Carbon	AA
R7707	RR-DZA033WJZZ	J	180k	3W	Spesial Carbon Film	AD
R7708	RR-DZA033WJZZ	J	180k	3W	Spesial Carbon Film	AD
R7709	VRW-KP3HC3R3K	J	3.3	5W	Cement	AC
R7710	VRD-RM2HD102JY	J	1k	1/2W	Carbon	AA
R7711	VRS-CY1JF222JY	J	2.2k	1/16W	Metal Oxide	AA
R7712	VRD-RM2HD220JY	J	22	1/2W	Carbon	AA
R7713	VRD-RA2BE562JY	J	5.6k	1/8W	Carbon	AA
R7714	VRD-RA2BE102JY	J	1k	1/8W	Carbon	AA
R7715	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R7716	VRN-VV3ABR22J	J	0.22	1W	Metal Film	AA
R7717	VRN-SV2HC1R0J	J	1	1/2W	Metal Film	AA
R7718	VRD-RM2HD221JY	J	220	1/2W	Carbon	AA
R7719	VRS-CY1JF102JY	J	1k	1/16W	Metal Oxide	AA
R7720	VRS-CY1JF271JY	J	270	1/16W	Metal Oxide	AA
R7721	VRD-RA2BE102JY	J	1k	1/8W	Carbon	AA
R7722	VRN-SV2HC1R0J	J	1	1/2W	Metal Film	AA
R7726	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R7727	VRN-RA2BK221FY	S	220	1/8W	Metal Film	AA
R7729	VRD-RA2BE222JY	J	2.2k	1/8W	Carbon	AA
R7730	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R7732	VRD-RM2HD221JY	J	220	1/2W	Carbon	AA
R7733	VRS-CY1JF102JY	J	1k	1/16W	Metal Oxide	AA
R7735	VRS-CY1JF473JY	J	47k	1/16W	Metal Oxide	AA
R7737	VRD-RA2BE102JY	J	1K	1/8W	Carbon	AA
R7738	VRS-CY1JF563JY	J	56k	1/16W	Metal Oxide	AA
R7739	VRD-RM2HD222JY	J	2.2k	1/2W	Carbon	AA
R7740	VRS-CY1JF104JY	J	100k	1/16W	Metal Oxide	AA
R7741	VRS-CY1JF182JY	J	1.8k	1/16W	Metal Oxide	AA
R7742	VRD-RA2BE223JY	J	22k	1/8W	Carbon	AA
R7743	VRS-CY1JF563JY	J	56k	1/16W	Metal Oxide	AA
R7744	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R7745	VRD-RA2EE102JY	J	1k	1/4W	Carbon	AA
R7746	VRS-VV3AB560J	J	56	1W	Metal Oxide	AA
R7747	VRD-RA2BE101JY	J	100	1/8W	Carbon	AA
R7748	VRD-RA2BE102JY	J	1k	1/8W	Carbon	AA
R7749	VRD-RA2BE102JY	J	1k	1/8W	Carbon	AA

MISCELLANEOUS PARTS

⚠ F7701	QFS-C3229CEZZ	J	Fuse, 3.15A/250V		AD
FH7701	QFSHD1017CEZZ+	J	Fuse Holder		AC
FH7702	QFSHD1018CEZZ+	J	Fuse Holder		AC
FB7702	RBLN-0020CEZZ	J	Ferrite Bead		AB
FB7704	RBLN-0090GEZZY	J	Ferrite Bead		AB
J3701	QJAKJ0101SEZZ	J	Jack, Headphone		AE
J3901	QJAKFA031WJZZ	J	Jack, Audio Out (L/R)		AE
J5000	QSOCD0439CEZZ	J	Socket S-Video		AF
J5001	QJAKGA067WJZZ	J	Jack, Audio (L/R)/Video		AE
P3301	QPLGN0442CEZZ	J	Plug, 4-pin (TS)		AB
P3601	QPLGZ1338CEZZ	J	Plug, 13-pin (MF)		AE
P3901	QCNCMA012WJZZ	J	Plug, 15-pin (MB)		AD
P3902	QCNCMA250WJZZ	S	Plug, 23-pin		AD
P7701	QCNCMA012WJZZ	J	Plug, 15-pin		AD
SC3601	QSOCN0895REZZ	J	Socket, 8-pin		AC
SC3901	QSOCZA056WJZZ	S	Socket, AV-IN1 (21-pin Euro-SCART)		AG
⚠ CN7701	QSOCAA003WJZZ	J	Socket, 2-pin (AC INPUT Terminal)		AD
RDA3301	PRDARA176WJFW	S	Heat Sink, for IC3301		AD
RDA7701	PRDARA158WJFW	S	Heat Sink, for IC7701		AC
RDA7702	PRDARA159WJFW	S	Heat Sink, for D7703/D7713		AC
	LX-BZ3100CEF7	S	Screw, x3		AA

Ref. No.	Part No.	★	Description	Code

DUNTC858WE04
OPERATION UNIT

DIODES

D4201	RH-EX0646GEZZY	J	Zener Diode	AA
D4202	RH-EX0604GEZZY	J	Zener Diode	AB
D4203	RH-EX0604GEZZY	J	Zener Diode	AB

RESISTORS

R4201	VRS-CY1JF122JY	J	1.2k	1/16W Metal Oxide	AA
R4202	VRS-CY1JF471JY	J	470	1/16W Metal Oxide	AA
R4203	VRS-CY1JF122JY	J	1.2k	1/16W Metal Oxide	AA
R4204	VRS-CY1JF471JY	J	470	1/16W Metal Oxide	AA
R4205	VRS-CY1JF332JY	J	3.3k	1/16W Metal Oxide	AA

SWITCHES

S4201	QSW-P0614CEZZ	J	MAIN POWER	AF
SW4202	QSW-K0003AJZZ+	J	CH(∨)	AB
SW4203	QSW-K0003AJZZ+	J	CH(∧)	AB
SW4204	QSW-K0003AJZZ+	J	INPUT	AB
SW4205	QSW-K0003AJZZ+	J	MENU	AB
SW4206	QSW-K0003AJZZ+	J	VOL(+)	AB
SW4207	QSW-K0003AJZZ+	J	VOL(–)	AB

MISCELLANEOUS PARTS

SC4201	QSOCN0596REZZ	J	Socket, 5-pin	AB

Ref. No.	Part No.	★	Description	Code

DUNTKC859WE04
R/C, LED UNIT

TRANSISTORS

Q4001	VSKRC104S//-1Y	J	KRC104S	AA
Q4002	VSKRC104S//-1Y	J	KRC104S	AA
Q4004	VSKRC104S//-1Y	J	KRC104S	AA
Q4005	VSKRC104S//-1Y	J	KRC104S	AA

DIODES

D4001	RH-PXA014WJZZ+	J	STANDBY/ON Indicator	AD
D4002	RH-PXA014WJZZ+	J	OPC Indicator	AD
D4004	RH-EX0640GEZZY	J	Zener Diode	AA
D4005	RH-EX0640GEZZY	J	Zener Diode	AA
D4007	RH-EX0640GEZZY	J	Zener Diode	AA
D4008	RH-PXA088WJZZ	J	OPC Sensor	AG

CAPACITORS

C4001	VCEAEA1CW106M+	J	10	16V	Electrolytic	AB
C4002	VCEAEA1CW106M+	J	10	16V	Electrolytic	AB
C4003	VCEAEA0JW107M+	J	100	6.3V	Electrolytic	AB
C4004	VCKYCY1HF103ZY	J	0.01	50V	Ceramic	AA

RESISTORS

R4001	VRS-CY1JF331JY	J	330	1/16W Metal Oxide	AA
R4002	VRS-CY1JF681JY	J	680	1/16W Metal Oxide	AA
R4003	VRS-CY1JF472JY	J	4.7k	1/16W Metal Oxide	AA
R4006	VRS-CY1JF101JY	J	100	1/16W Metal Oxide	AA
R4007	VRS-CY1JF331JY	J	330	1/16W Metal Oxide	AA
R4010	VRS-CY1JF333JY	J	33k	1/16W Metal Oxide	AA

MISCELLANEOUS PARTS

SC4001	QSOCN0896REZZ	J	Socket, 8-pin	AC
RMC4001	RRMCUA034WJQZ	J	R/C Receiver	AE
	LHLDZA486WJZZ	S	LED Holder	AD

DUNTKC860FM03
MAIN UNIT

TUNER

NOTE: THE PARTS HERE SHOWN ARE SUPPLIED AS AN ASSEMBLY BUT NOT INDEPENDENTLY.

Ref. No.	Part No.	★	Description	Code
TU201	VTUVT1Y5ED501	S	Tuner	AS

INTEGRATED CIRCUITS

Ref. No.	Part No.	★	Description	Code
IC101	VHiM24C64WN-1Y	J	M24C64-WMN6T	AL
IC151	VHi39VF01WH-1Q	J	I.C.	AN
IC501	RH-iXB219WJZZQ	J	I.C.	BK
IC701	VHiLM1117MJ-1Y	J	LM1117MPX-ADJ	AF
IC702	VHiMM1563DF-1Y	J	MM1563DFBE	AE
IC703	VHiLM1117MJ-1Y	J	LM1117MPX-ADJ	AF
IC704	VHiBA05FP++-1Y	J	BA05FP-E2	AF
IC751	VHiNJ79M08D-1Y	J	NJM79M08DL1A	AF
IC801	RH-iX3251CEZZY	J	TDA9178T/N1	AY
IC1101	VHiBD8120FP-1Y	J	BD8120FP	AX
IC1201	RH-iXA370WJZZQ	J	LR38819	AY
IC2201	VHiTLVDF84B-1Y	J	THC63LVDF84B	AT

TRANSISTORS

Ref. No.	Part No.	★	Description	Code
Q101	VSFMMT718//-1Y	J	FMMT718	AE
Q102	VS2SC3928AR-1Y	J	2SC3928AR	AB
Q103	VSFMMT718//-1Y	J	FMMT718	AE
Q104	VS2SC3928AR-1Y	J	2SC3928AR	AB
Q105	VSUM5K1NTR+-1Y	J	UM5K1NTR	AC
Q201	VS2SC3928AR-1Y	J	2SC3928AR	AB
Q202	VS2SC3928AR-1Y	J	2SC3928AR	AB
Q205	VS2SC3928AR-1Y	J	2SC3928AR	AB
Q701	VSDTA144EE/-1Y	J	DTA144EE	AA
Q702	VSDTA124EE/-1Y	J	DTA124EE	AB
Q751	VS2SC3928AR-1Y	J	2SC3928AR	AB
Q752	VS2SA1530AR-1Y	J	2SA1530AR	AB
Q753	VSDTC144EE/-1Y	J	DTC144EE	AA
Q754	VSFMMT718//-1Y	J	FMMT718	AE
Q755	VSDTC144EE/-1Y	J	DTC144EE	AA
Q756	VSDTC144EE/-1Y	J	DTC144EE	AA
Q757	VSDTC144EE/-1Y	J	DTC144EE	AA
Q758	VS2SC3928AR-1Y	J	2SC3928AR	AB
Q759	VSDTA144EE/-1Y	J	DTA144EE	AA
Q801	VS2SC3928AR-1Y	J	2SC3928AR	AB
Q802	VS2SC3928AR-1Y	J	2SC3928AR	AB
Q803	VS2SC3928AR-1Y	J	2SC3928AR	AB
Q1105	VS2SC4520//-1Y	J	2SC4520	AE
Q1106	VS2SA1729//-1Y	J	2SA1729	AF

DIODES

Ref. No.	Part No.	★	Description	Code
D101	VHDHSU119//-1Y	J	Diode	AB
D202	RH-EXA101WJZZY	J	Zener Diode	AB
D203	VHDRB481K++-1Y	J	Diode	AD
D204	VHD1SS390++-1Y	J	Diode	AB
D205	VHDHSU119//-1Y	J	Diode	AB
D206	VHDHSU119//-1Y	J	Diode	AB
D208	VHD1SS390++-1Y	J	Diode	AB
D701	VHDHSU119//-1Y	J	Diode	AB
D702	VHDHSU119//-1Y	J	Diode	AB
D703	VHDHSU119//-1Y	J	Diode	AB
D704	VHD1SS119//-1Y	J	Diode	AA
D751	RH-EXA099WJZZY	J	Zener Diode	AB
D755	VHDRB481K++-1Y	J	Diode	AD
D756	VHDHSU119//-1Y	J	Diode	AB
D757	VHDHSU119//-1Y	J	Diode	AB
D759	VHD1SS250//1EY	J	Diode	AB
D1103	VHD1SS250//1EY	J	Diode	AB
D1104	VHD1SS250//1EY	J	Diode	AB

PACKAGED CIRCUITS

Ref. No.	Part No.	★	Description	Code
X101	RCRSAA058WJZZ	J	Crystal	AD
X501	RCRSAA037WJZZ	J	Crystal	AE

FILTERS AND COILS

Ref. No.	Part No.	★	Description	Code
SF201	RFiLCA102WJZZ	S	S.A.W Filter	AH
SF202	RFiLCA103WJZZ	S	S.A.W Filter	AM
L202	RCiLPA143WJZZY	J	Coil	AD
L751	RCiLPA143WJZZY	J	Coil	AD
L752	VPCNN470J5R4NY	J	Peaking 47µH	AB
L2201	VPCNN2R7JR85NY	J	Peaking 2.7µH	AB
L2202	VPCNN2R7JR85NY	J	Peaking 2.7µH	AB

CAPACITORS

Ref. No.	Part No.	★				Code
C101	VCKYCY1CF224ZY	J	0.22	16V	Ceramic	AB
C102	VCKYCY1CF224ZY	J	0.22	16V	Ceramic	AB
C104	VCKYCY1CF224ZY	J	0.22	16V	Ceramic	AB
C106	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C107	VCKYCY1CF224ZY	J	0.22	16V	Ceramic	AB
C109	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C110	VCKYCY1CF224ZY	J	0.22	16V	Ceramic	AB
C111	VCEAPF0JW227MY	J	220	6.3V	Electrolytic	AD
C113	VCKYCY1CF224ZY	J	0.22	16V	Ceramic	AB
C116	VCKYCY1CF224ZY	J	0.22	16V	Ceramic	AB
C117	VCEAPF0JW107MY	J	100	6.3V	Electrolytic	AC
C118	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C119	VCKYCY1CF224ZY	J	0.22	16V	Ceramic	AB
C121	VCKYCY1CF224ZY	J	0.22	16V	Ceramic	AB
C122	VCKYCY1CF224ZY	J	0.22	16V	Ceramic	AB
C123	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C124	VCEAPF0JW107MY	J	100	6.3V	Electrolytic	AC
C126	VCEAPF1CW106MY	J	10	16V	Electrolytic	AB
C127	VCKYCY1CB223KY	J	0.022	16V	Ceramic	AB
C128	VCCCCY1HH101JY	J	100p	50V	Ceramic	AA
C151	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C152	VCEAPF1CW106MY	J	10	16V	Electrolytic	AB
C161	VCCCCY1HH101JY	J	100p	50V	Ceramic	AA
C162	VCCCCY1HH101JY	J	100p	50V	Ceramic	AA
C163	VCCCCY1HH101JY	J	100p	50V	Ceramic	AA
C201	VCEAPF1CW106MY	J	10	16V	Electrolytic	AB
C203	VCKYCY1HF333ZY	S	0.033	50V	Ceramic	AA
C204	VCEAPF1CW476MY	J	47	16V	Electrolytic	AC
C205	VCEAPF1CW476MY	J	47	16V	Electrolytic	AC
C206	VCEAPF0JW227MY	J	220	6.3V	Electrolytic	AD
C207	VCEAPF1HW225MY	J	2.2	50V	Electrolytic	AB
C208	VCKYCY1HB103KY	J	0.01	50V	Ceramic	AA
C213	VCKYCY1HB103KY	J	0.01	50V	Ceramic	AA
C215	VCEAPF1CW106MY	J	10	16V	Electrolytic	AB
C216	VCEAPF1HW225MY	J	2.2	50V	Electrolytic	AB
C217	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C218	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C220	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C301	VCEAPF1HW475MY	J	4.7	50V	Electrolytic	AC
C302	VCKYCY1HB392KY	J	3900p	50V	Ceramic	AA
C303	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C304	VCEAPF1HW225MY	J	2.2	50V	Electrolytic	AB
C305	VCCCCY1HH101JY	J	100p	50V	Ceramic	AA
C306	VCCCCY1HH101JY	J	100p	50V	Ceramic	AA
C331	VCCCCY1HH101JY	J	100p	50V	Ceramic	AA
C332	VCCCCY1HH101JY	J	100p	50V	Ceramic	AA
C358	VCCCCY1HH101JY	J	100p	50V	Ceramic	AA
C359	VCCCCY1HH101JY	J	100p	50V	Ceramic	AA
C360	VCCCCY1HH101JY	J	100p	50V	Ceramic	AA
C361	VCCCCY1HH101JY	J	100p	50V	Ceramic	AA
C362	VCKYTV1EB474KY	J	0.47	25V	Ceramic	AC
C363	VCKYTV1EB474KY	J	0.47	25V	Ceramic	AC
C366	VCCCCY1HH101JY	J	100p	50V	Ceramic	AA
C367	VCCCCY1HH101JY	J	100p	50V	Ceramic	AA
C368	VCKYTV1EB474KY	J	0.47	25V	Ceramic	AC
C369	VCKYTV1EB474KY	J	0.47	25V	Ceramic	AC
C409	VCCCCY1HH101JY	J	100p	50V	Ceramic	AA
C410	VCCCCY1HH101JY	J	100p	50V	Ceramic	AA
C411	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C412	VCCCCY1HH101JY	J	100p	50V	Ceramic	AA
C413	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C414	VCKYCY1HB103KY	J	0.01	50V	Ceramic	AA
C415	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C416	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C417	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C418	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C419	VCCCCY1HH101JY	J	100p	50V	Ceramic	AA

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MAIN UNIT (Continued)

Ref. No.	Part No.	★			Description	Code
C420	VCEAPF1CW106MY	J	10	16V	Electrolytic	AB
C421	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C501	VCEAPF0JW226MY	J	22	6.3V	Electrolytic	AB
C504	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C505	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C506	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C507	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C510	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C511	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C512	VCEAPF0JW226MY	J	22	6.3V	Electrolytic	AB
C513	VCEAPF1CW106MY	J	10	16V	Electrolytic	AB
C514	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C515	VCKYCY1HB102KY	J	1000p	50V	Ceramic	AA
C517	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C518	VCKYCY1HB102KY	J	1000p	50V	Ceramic	AA
C519	VCCCCY1HH8R0DY	J	8.0p	50V	Ceramic	AA
C520	VCCCCY1HH8R0DY	J	8.0p	50V	Ceramic	AA
C521	VCEAPF0JW226MY	J	22	6.3V	Electrolytic	AB
C522	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C523	VCEAPF0JW226MY	J	22	6.3V	Electrolytic	AB
C524	VCEAPF0JW226MY	J	22	6.3V	Electrolytic	AB
C525	VCEAPF0JW226MY	J	22	6.3V	Electrolytic	AB
C535	VCKYCY1CF224ZY	J	0.22	16V	Ceramic	AB
C536	VCKYCY1CF224ZY	J	0.22	16V	Ceramic	AB
C547	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C548	VCKYCY1CF224ZY	J	0.22	16V	Ceramic	AB
C549	VCEAPF0JW107MY	J	100	6.3V	Electrolytic	AC
C550	VCKYCY1CF224ZY	J	0.22	16V	Ceramic	AB
C551	VCEAPF0JW107MY	J	100	6.3V	Electrolytic	AC
C552	VCKYCY1CF224ZY	J	0.22	16V	Ceramic	AB
C554	VCKYCY1CF224ZY	J	0.22	16V	Ceramic	AB
C556	VCEAPF0JW107MY	J	100	6.3V	Electrolytic	AC
C557	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C558	VCKYCY1CF224ZY	J	0.22	16V	Ceramic	AB
C570	VCKYCY1CB333KY	J	0.033	16V	Ceramic	AA
C571	VCCCCY1HH100DY	J	10p	50V	Ceramic	AA
C574	VCKYCY1CB333KY	J	0.033	16V	Ceramic	AA
C575	VCKYCY1CB333KY	J	0.033	16V	Ceramic	AA
C576	VCCCCY1HH100DY	J	10p	50V	Ceramic	AA
C578	VCKYCY1CB333KY	J	0.033	16V	Ceramic	AA
C579	VCKYCY1CB223KY	J	0.022	16V	Ceramic	AB
C580	VCKYCY1CB333KY	J	0.033	16V	Ceramic	AA
C581	VCCCCY1HH100DY	J	10p	50V	Ceramic	AA
C582	VCKYCY1CB333KY	J	0.033	16V	Ceramic	AA
C701	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C702	VCEAPF1CW476MY	J	47	16V	Electrolytic	AC
C703	VCEAPF0JW107MY	J	100	6.3V	Electrolytic	AC
C704	VCEAPF1CW476MY	J	47	16V	Electrolytic	AC
C709	VCEAPF1CW106MY	J	10	16V	Electrolytic	AB
C710	VCEAPF1CW476MY	J	47	16V	Electrolytic	AC
C711	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C712	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C720	VCEAPF1CW106MY	J	10	16V	Electrolytic	AB
C721	VCKYCY1HB471KY	J	470p	50V	Ceramic	AA
C722	VCEAPF1CW476MY	J	47	16V	Electrolytic	AC
C723	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C724	VCEAPF1CW106MY	J	10	16V	Electrolytic	AB
C725	VCKYCY1CF224ZY	J	0.22	16V	Ceramic	AB
C751	VCEASN1HN225MY	J	2.2	50V	Electrolytic	AB
C752	VCEAPF1CW106MY	J	10	16V	Electrolytic	AB
C753	VCEAPF1CW107MY	J	100	16V	Electrolytic	AC
C754	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C758	RC-KZ0075TAZZY	J	2.2	16V	Ceramic	AC
C759	VCEASN1HN225MY	J	2.2	50V	Electrolytic	AB
C760	VCEAPF1CW107MY	J	100	16V	Electrolytic	AC
C761	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C763	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C764	VCEASN1HN475MY	J	4.7	50V	Electrolytic	AC
C765	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C766	VCEAPF0JW227MY	J	220	6.3V	Electrolytic	AD
C801	VCEAPF1HW105MY	J	1	50V	Electrolytic	AB
C802	VCKYCY1HB682KY	J	6800p	50V	Ceramic	AA
C803	VCKYCY1CF224ZY	J	0.22	16V	Ceramic	AB
C804	VCEAPF1CW106MY	J	10	16V	Electrolytic	AB
C805	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C806	VCKYCY1CF334ZY	J	0.33	16V	Ceramic	AB
C807	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C808	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C809	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C810	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C811	VCCCCY1HH220JY	J	22p	50V	Ceramic	AA
C812	VCCCCY1HH220JY	J	22p	50V	Ceramic	AA
C813	VCCCCY1HH220JY	J	22p	50V	Ceramic	AA
C814	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C815	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C816	VCEAPF1CW106MY	J	10	16V	Electrolytic	AB
C817	RC-KZ0074TAZZY	J	10	6.3V	Ceramic	AF
C818	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C819	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C820	VCEAPF1CW476MY	J	47	16V	Electrolytic	AC
C821	VCKYCY1HB102KY	J	1000p	50V	Ceramic	AA
C822	VCEAPF0JW107MY	J	100	6.3V	Electrolytic	AC
C823	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C825	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C826	VCEAPF1CW106MY	J	10	16V	Electrolytic	AB
C827	RC-KZ0074TAZZY	J	10	6.3V	Ceramic	AF
C828	RC-KZ0074TAZZY	J	10	6.3V	Ceramic	AF
C829	RC-KZ0074TAZZY	J	10	6.3V	Ceramic	AF
C830	VCCCCY1HH470JY	J	47p	50V	Ceramic	AA
C831	VCCCCY1HH470JY	J	47p	50V	Ceramic	AA
C832	VCCCCY1HH470JY	J	47p	50V	Ceramic	AA
C833	VCKYCY1HB271KY	J	270p	50V	Ceramic	AA
C834	VCKYCY1HB271KY	J	270p	50V	Ceramic	AA
C835	VCKYCY1HB271KY	J	270p	50V	Ceramic	AA
C1104	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C1106	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C1107	RC-KZA041WJZZY	J	10	10V	Ceramic	AC
C1108	VCCCCY1HH560JY	J	56p	50V	Ceramic	AB
C1109	RC-KZA041WJZZY	J	10	10V	Ceramic	AC
C1110	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C1116	VCKYTV1CB105KY	J	1	16V	Ceramic	AC
C1117	VCKYTV1CB105KY	J	1	16V	Ceramic	AC
C1118	VCKYCY1EB104KY	J	0.1	25V	Ceramic	AB
C1119	RC-KZA041WJZZY	J	10	10V	Ceramic	AC
C1120	VCEASN1HN106MY	J	10	50V	Electrolytic	AC
C1202	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C1203	RC-KZ0117TAZZY	J	4.7	6.3V	Ceramic	AD
C1210	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C1213	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C1214	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C1215	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C1216	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C2201	VCEAPF1CW106MY	J	10	16V	Electrolytic	AB
C2202	VCKYCY1HB103KY	J	0.01	50V	Ceramic	AA
C2203	VCEAPF1CW106MY	J	10	16V	Electrolytic	AB
C2204	VCKYCY1HB103KY	J	0.01	50V	Ceramic	AA
C2205	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C2206	VCCCCY1HH470JY	J	47p	50V	Ceramic	AA

RESISTORS

R101	VRS-CY1JF332JY	J	3.3k	1/16W	Metal Oxide	AA
R102	VRS-CY1JF332JY	J	3.3k	1/16W	Metal Oxide	AA
R103	VRS-CY1JF101JY	J	100	1/16W	Metal Oxide	AA
R104	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R105	VRS-CY1JF153JY	J	15k	1/16W	Metal Oxide	AA
R106	VRS-CY1JF101JY	J	100	1/16W	Metal Oxide	AA
R107	VRS-CY1JF101JY	J	100	1/16W	Metal Oxide	AA
R108	VRS-CY1JF101JY	J	100	1/16W	Metal Oxide	AA
R109	VRS-CY1JF222JY	J	2.2k	1/16W	Metal Oxide	AA
R111	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R113	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R114	VRS-CY1JF2R2JY	J	2.2	1/16W	Metal Oxide	AA
R115	VRS-CY1JF2R2JY	J	2.2	1/16W	Metal Oxide	AA
R116	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R117	VRS-CY1JF2R2JY	J	2.2	1/16W	Metal Oxide	AA
R118	VRS-CY1JF2R2JY	J	2.2	1/16W	Metal Oxide	AA

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Ref. No.	Part No.	★		Description	Code
R119	VRS-CY1JF103JY	J	10k	1/16W Metal Oxide	AA
R120	VRS-CY1JF103JY	J	10k	1/16W Metal Oxide	AA
R122	VRS-CY1JF153JY	J	15k	1/16W Metal Oxide	AA
R123	VRS-CY1JF102JY	J	1k	1/16W Metal Oxide	AA
R124	VRS-CY1JF154JY	J	150k	1/16W Metal Oxide	AA
R125	VRS-CY1JF332JY	J	3.3k	1/16W Metal Oxide	AA
R126	VRS-CY1JF101JY	J	100	1/16W Metal Oxide	AA
R127	VRS-CY1JF000JY	J	0	1/16W Metal Oxide	AA
R129	VRS-CY1JF101JY	J	100	1/16W Metal Oxide	AA
R131	VRS-CY1JF101JY	J	100	1/16W Metal Oxide	AA
R132	VRS-CY1JF101JY	J	100	1/16W Metal Oxide	AA
R133	VRS-CY1JF101JY	J	100	1/16W Metal Oxide	AA
R134	VRS-CY1JF101JY	J	100	1/16W Metal Oxide	AA
R136	VRS-CY1JF472JY	J	4.7k	1/16W Metal Oxide	AA
R137	VRS-CY1JF472JY	J	4.7k	1/16W Metal Oxide	AA
R138	VRS-CY1JF101JY	J	100	1/16W Metal Oxide	AA
R139	VRS-CY1JF101JY	J	100	1/16W Metal Oxide	AA
R140	VRS-CY1JF101JY	J	100	1/16W Metal Oxide	AA
R141	VRS-CY1JF101JY	J	100	1/16W Metal Oxide	AA
R142	VRS-CY1JF101JY	J	100	1/16W Metal Oxide	AA
R143	VRS-CY1JF101JY	J	100	1/16W Metal Oxide	AA
R144	VRS-CY1JF101JY	J	100	1/16W Metal Oxide	AA
R145	VRS-CY1JF332JY	J	3.3k	1/16W Metal Oxide	AA
R146	VRS-CY1JF101JY	J	100	1/16W Metal Oxide	AA
R147	VRS-CY1JF101JY	J	100	1/16W Metal Oxide	AA
R148	VRS-CY1JF101JY	J	100	1/16W Metal Oxide	AA
R149	VRS-CY1JF101JY	J	100	1/16W Metal Oxide	AA
R151	VRS-CY1JF103JY	J	10k	1/16W Metal Oxide	AA
R152	VRS-CY1JF103JY	J	10k	1/16W Metal Oxide	AA
R161	VRS-CY1JF332JY	J	3.3k	1/16W Metal Oxide	AA
R164	VRS-CY1JF332JY	J	3.3k	1/16W Metal Oxide	AA
R201	VRS-CY1JF101JY	J	100	1/16W Metal Oxide	AA
R202	VRS-CY1JF122JY	J	1.2k	1/16W Metal Oxide	AA
R203	VRS-CY1JF103JY	J	10k	1/16W Metal Oxide	AA
R204	VRS-CY1JF122JY	J	1.2k	1/16W Metal Oxide	AA
R205	VRS-CY1JF122JY	J	1.2k	1/16W Metal Oxide	AA
R206	VRS-CY1JF473JY	J	47k	1/16W Metal Oxide	AA
R207	VRS-CY1JF000JY	J	0	1/16W Metal Oxide	AA
R208	VRS-CY1JF392JY	J	3.9k	1/16W Metal Oxide	AA
R209	VRS-CY1JF103JY	J	10k	1/16W Metal Oxide	AA
R210	VRS-CY1JF153JY	J	15k	1/16W Metal Oxide	AA
R211	VRS-CY1JF332JY	J	3.3k	1/16W Metal Oxide	AA
R212	VRS-CY1JF000JY	J	0	1/16W Metal Oxide	AA
R217	VRS-CY1JF102JY	J	1k	1/16W Metal Oxide	AA
R218	VRS-CY1JF681JY	J	680	1/16W Metal Oxide	AA
R219	VRS-CJ1JF102JY	J	1k	1/16W Metal Oxide	AA
R220	VRS-CY1JF122JY	J	1.2k	1/16W Metal Oxide	AA
R221	VRS-CY1JF122JY	J	1.2k	1/16W Metal Oxide	AA
R224	VRS-CY1JF000JY	J	0	1/16W Metal Oxide	AA
R237	VRS-CY1JF000JY	J	0	1/16W Metal Oxide	AA
R239	VRS-CY1JF222JY	J	2.2k	1/16W Metal Oxide	AA
R301	VRS-CY1JF391JY	J	390	1/16W Metal Oxide	AA
R302	VRS-CY1JF101JY	J	100	1/16W Metal Oxide	AA
R303	VRS-CY1JF101JY	J	100	1/16W Metal Oxide	AA
R304	VRS-CY1JF101JY	J	100	1/16W Metal Oxide	AA
R305	VRS-CY1JF101JY	J	100	1/16W Metal Oxide	AA
R306	VRS-CY1JF101JY	J	100	1/16W Metal Oxide	AA
R362	VRS-CY1JF101JY	J	100	1/16W Metal Oxide	AA
R363	VRS-CY1JF101JY	J	100	1/16W Metal Oxide	AA
R364	VRS-CY1JF103JY	J	10k	1/16W Metal Oxide	AA
R365	VRS-CY1JF103JY	J	10k	1/16W Metal Oxide	AA
R366	VRS-CY1JF103JY	J	10k	1/16W Metal Oxide	AA
R367	VRS-CY1JF103JY	J	10k	1/16W Metal Oxide	AA
R368	VRS-CY1JF103JY	J	10k	1/16W Metal Oxide	AA
R369	VRS-CY1JF103JY	J	10k	1/16W Metal Oxide	AA
R370	VRD-RA2BE103JY	J	10k	1/8W Carbon	AA
R371	VRD-RA2BE103JY	J	10k	1/8W Carbon	AA
R423	VRS-CY1JF101JY	J	100	1/16W Metal Oxide	AA
R544	VRS-CY1JF823JY	J	82k	1/16W Metal Oxide	AA
R548	VRS-CY1JF000JY	J	0	1/16W Metal Oxide	AA
R549	VRS-CY1JF000JY	J	0	1/16W Metal Oxide	AA
R550	VRS-CY1JF000JY	J	0	1/16W Metal Oxide	AA
R551	VRS-CY1JF000JY	J	0	1/16W Metal Oxide	AA
R552	VRS-CY1JF000JY	J	0	1/16W Metal Oxide	AA
R553	VRS-CY1JF000JY	J	0	1/16W Metal Oxide	AA
R554	VRS-CY1JF000JY	J	0	1/16W Metal Oxide	AA
R557	VRS-CY1JF000JY	J	0	1/16W Metal Oxide	AA
R558	VRS-CY1JF000JY	J	0	1/16W Metal Oxide	AA
R559	VRS-CY1JF000JY	J	0	1/16W Metal Oxide	AA
R570	VRS-CY1JF100JY	J	10	1/16W Metal Oxide	AA
R571	VRS-CY1JF470JY	J	47	1/16W Metal Oxide	AA
R573	VRS-CY1JF100JY	J	10	1/16W Metal Oxide	AA
R574	VRS-CY1JF470JY	J	47	1/16W Metal Oxide	AA
R575	VRS-CY1JF100JY	J	10	1/16W Metal Oxide	AA
R576	VRS-CY1JF470JY	J	47	1/16W Metal Oxide	AA
R577	VRS-CY1JF123JY	J	12k	1/16W Metal Oxide	AA
R701	VRS-CY1JF121JY	J	120	1/16W Metal Oxide	AA
R702	VRS-CY1JF271JY	J	270	1/16W Metal Oxide	AA
R704	VRS-CY1JF472JY	J	4.7k	1/16W Metal Oxide	AA
R705	VRS-CY1JF000JY	J	0	1/16W Metal Oxide	AA
R709	VRS-TW2HF000JY	J	0	1/2W Metal Oxide	AA
R710	VRS-CY1JF271JY	J	270	1/16W Metal Oxide	AA
R711	VRS-CY1JF471JY	J	470	1/16W Metal Oxide	AA
R714	VRS-TW2HF1R0JY	J	1	1/2W Metal Oxide	AA
R715	VRS-TW2HF1R0JY	J	1	1/2W Metal Oxide	AA
R716	VRS-TW2HF101JY	J	100	1/2W Metal Oxide	AA
R717	VRS-TW2HF101JY	J	100	1/2W Metal Oxide	AA
R718	VRS-VV3AB270J	J	27	1W Metal Oxide	AA
R721	VRS-CY1JF105JY	J	1M	1/16W Metal Oxide	AA
R722	VRS-TW2HF1R0JY	J	1	1/2W Metal Oxide	AA
R751	VRS-CY1JF472JY	J	4.7k	1/16W Metal Oxide	AA
R752	VRS-CY1JF272JY	J	2.7k	1/16W Metal Oxide	AA
R753	VRS-TW2ED102JY	J	1k	1/4W Metal Oxide	AA
R754	VRS-CY1JF472JY	J	4.7k	1/16W Metal Oxide	AA
R755	VRS-CY1JF472JY	J	4.7k	1/16W Metal Oxide	AA
R757	VRS-TW2ED103JY	J	10k	1/4W Metal Oxide	AA
R761	VRS-CY1JF103JY	J	10k	1/16W Metal Oxide	AA
R762	VRS-CY1JF103JY	J	10k	1/16W Metal Oxide	AA
R764	VRS-CY1JF223JY	J	22k	1/16W Metal Oxide	AA
R766	VRS-TW2HF330JY	J	33	1/2W Metal Oxide	AA
R767	VRS-TW2HF472JY	J	4.7k	1/2W Metal Oxide	AA
R769	VRS-CY1JF562JY	J	5.6k	1/16W Metal Oxide	AA
R801	VRS-CY1JF102JY	J	1k	1/16W Metal Oxide	AA
R802	VRS-CY1JF123JY	J	12k	1/16W Metal Oxide	AA
R803	VRS-CY1JF101JY	J	100	1/16W Metal Oxide	AA
R804	VRS-CY1JF103JY	J	10k	1/16W Metal Oxide	AA
R805	VRS-CY1JF103JY	J	10k	1/16W Metal Oxide	AA
R806	VRS-CY1JF105JY	J	1M	1/16W Metal Oxide	AA
R807	VRS-CY1JF393JY	J	39k	1/16W Metal Oxide	AA
R808	VRS-CY1JF101JY	J	100	1/16W Metal Oxide	AA
R809	VRS-CY1JF101JY	J	100	1/16W Metal Oxide	AA
R810	VRS-CY1JF101JY	J	100	1/16W Metal Oxide	AA
R811	VRS-CY1JF101JY	J	100	1/16W Metal Oxide	AA
R812	VRS-CY1JF101JY	J	100	1/16W Metal Oxide	AA
R813	VRS-CY1JF101JY	J	100	1/16W Metal Oxide	AA
R814	VRS-CY1JF101JY	J	100	1/16W Metal Oxide	AA
R815	VRS-CY1JF100JY	J	10	1/16W Metal Oxide	AA
R816	VRS-CY1JF273JY	J	27k	1/16W Metal Oxide	AA
R817	VRS-CY1JF473JY	J	47k	1/16W Metal Oxide	AA
R819	VRS-CY1JF103JY	J	10k	1/16W Metal Oxide	AA
R820	VRS-CY1JF103JY	J	10k	1/16W Metal Oxide	AA
R821	VRS-CY1JF103JY	J	10k	1/16W Metal Oxide	AA
R822	VRS-CY1JF472JY	J	4.7k	1/16W Metal Oxide	AA
R823	VRS-CY1JF472JY	J	4.7k	1/16W Metal Oxide	AA
R824	VRS-CY1JF472JY	J	4.7k	1/16W Metal Oxide	AA
R825	VRS-CY1JF103JY	J	10k	1/16W Metal Oxide	AA
R826	VRS-CY1JF104JY	J	100k	1/16W Metal Oxide	AA
R827	VRS-CY1JF473JY	J	47k	1/16W Metal Oxide	AA
R828	VRS-CY1JF101JY	J	100	1/16W Metal Oxide	AA
R829	VRS-CY1JF101JY	J	100	1/16W Metal Oxide	AA
R830	VRS-CY1JF101JY	J	100	1/16W Metal Oxide	AA
R831	VRS-CY1JF121JY	J	120	1/16W Metal Oxide	AA
R832	VRS-CY1JF121JY	J	120	1/16W Metal Oxide	AA
R833	VRS-CY1JF121JY	J	120	1/16W Metal Oxide	AA
R834	VRS-CY1JF750JY	J	75	1/16W Metal Oxide	AA
R835	VRS-CY1JF750JY	J	75	1/16W Metal Oxide	AA

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MAIN UNIT (Continued)

Ref. No.	Part No.	★	Description	Code
R836	VRS-CY1JF750JY	J	75 1/16W Metal Oxide	AA
R1101	VRS-CY1JF273JY	J	27k 1/16W Metal Oxide	AA
R1102	VRS-CY1JF472JY	J	4.7k 1/16W Metal Oxide	AA
R1103	VRS-CY1JF472JY	J	4.7k 1/16W Metal Oxide	AA
R1104	VRS-CY1JF103JY	J	10k 1/16W Metal Oxide	AA
R1112	VRS-CY1JF181JY	J	180 1/16W Metal Oxide	AA
R1113	VRS-CY1JF102JY	J	1k 1/16W Metal Oxide	AA
R1114	VRS-CY1JF181JY	J	180 1/16W Metal Oxide	AA
R1117	VRS-TW2HF5R6JY	J	5.6 1/2W Metal Oxide	AA
R1118	VRS-TW2HF5R6JY	J	5.6 1/2W Metal Oxide	AA
R1121	VRS-CY1JF000JY	J	0 1/16W Metal Oxide	AA
R1122	VRS-CY1JF000JY	J	0 1/16W Metal Oxide	AA
R1123	VRS-TW2HF000JY	J	0 1/2W Metal Oxide	AA
R1124	VRS-TW2HF101JY	J	100 1/2W Metal Oxide	AA
R1126	VRS-CY1JF000JY	J	0 1/16W Metal Oxide	AA
R1128	VRS-CY1JF000JY	J	0 1/16W Metal Oxide	AA
R1129	VRS-CY1JF103JY	J	10k 1/16W Metal Oxide	AA
R1130	VRS-CY1JF000JY	J	0 1/16W Metal Oxide	AA
R1203	VRS-CY1JF101JY	J	100 1/16W Metal Oxide	AA
R1204	VRS-CY1JF101JY	J	100 1/16W Metal Oxide	AA
R1205	VRK-CD1JJ220JY	J	22 1/16W Metal Compo.	AC
R1206	VRK-CD1JJ220JY	J	22 1/16W Metal Compo.	AC
R1207	VRK-CD1JJ220JY	J	22 1/16W Metal Compo.	AC
R1208	VRS-CY1JF220JY	J	22 1/16W Metal Oxide	AA
R1209	VRS-CY1JF220JY	J	22 1/16W Metal Oxide	AA
R1210	VRS-CA1JF220JY	J	22 1/16W Metal Oxide	AA
R1211	VRS-CA1JF101JY	J	100 1/16W Metal Oxide	AA
R1214	VRS-CY1JF101JY	J	100 1/16W Metal Oxide	AA
R1215	VRS-CY1JF101JY	J	100 1/16W Metal Oxide	AA
R1216	VRS-CY1JF101JY	J	100 1/16W Metal Oxide	AA
R1217	VRS-CY1JF101JY	J	100 1/16W Metal Oxide	AA
R1218	VRS-CY1JF220JY	J	22 1/16W Metal Oxide	AA
R1223	VRS-CY1JF000JY	J	0 1/16W Metal Oxide	AA
R1230	VRS-CY1JF472JY	J	4.7k 1/16W Metal Oxide	AA
R1240	VRS-CY1JF101JY	J	100 1/16W Metal Oxide	AA
R1241	VRS-CY1JF101JY	J	100 1/16W Metal Oxide	AA
R1242	VRS-CY1JF101JY	J	100 1/16W Metal Oxide	AA
R1243	VRS-CY1JF000JY	J	0 1/16W Metal Oxide	AA
R2203	VRS-CB1JF470JY	J	47 1/16W Metal Oxide	AA
R2204	VRS-CB1JF470JY	J	47 1/16W Metal Oxide	AA
R2205	VRS-CB1JF470JY	J	47 1/16W Metal Oxide	AA
R2206	VRS-CB1JF470JY	J	47 1/16W Metal Oxide	AA
R2207	VRS-CB1JF470JY	J	47 1/16W Metal Oxide	AA
R2208	VRS-CB1JF470JY	J	47 1/16W Metal Oxide	AA
R2224	VRS-CY1JF101JY	J	100 1/16W Metal Oxide	AA
R2225	VRS-CY1JF101JY	J	100 1/16W Metal Oxide	AA
R2226	VRS-CY1JF101JY	J	100 1/16W Metal Oxide	AA
R2227	VRS-CY1JF101JY	J	100 1/16W Metal Oxide	AA
R2228	VRS-CY1JF101JY	J	100 1/16W Metal Oxide	AA
R2232	VRS-CY1JF100JY	J	10 1/16W Metal Oxide	AA
R2233	VRS-CY1JF103JY	J	10k 1/16W Metal Oxide	AA

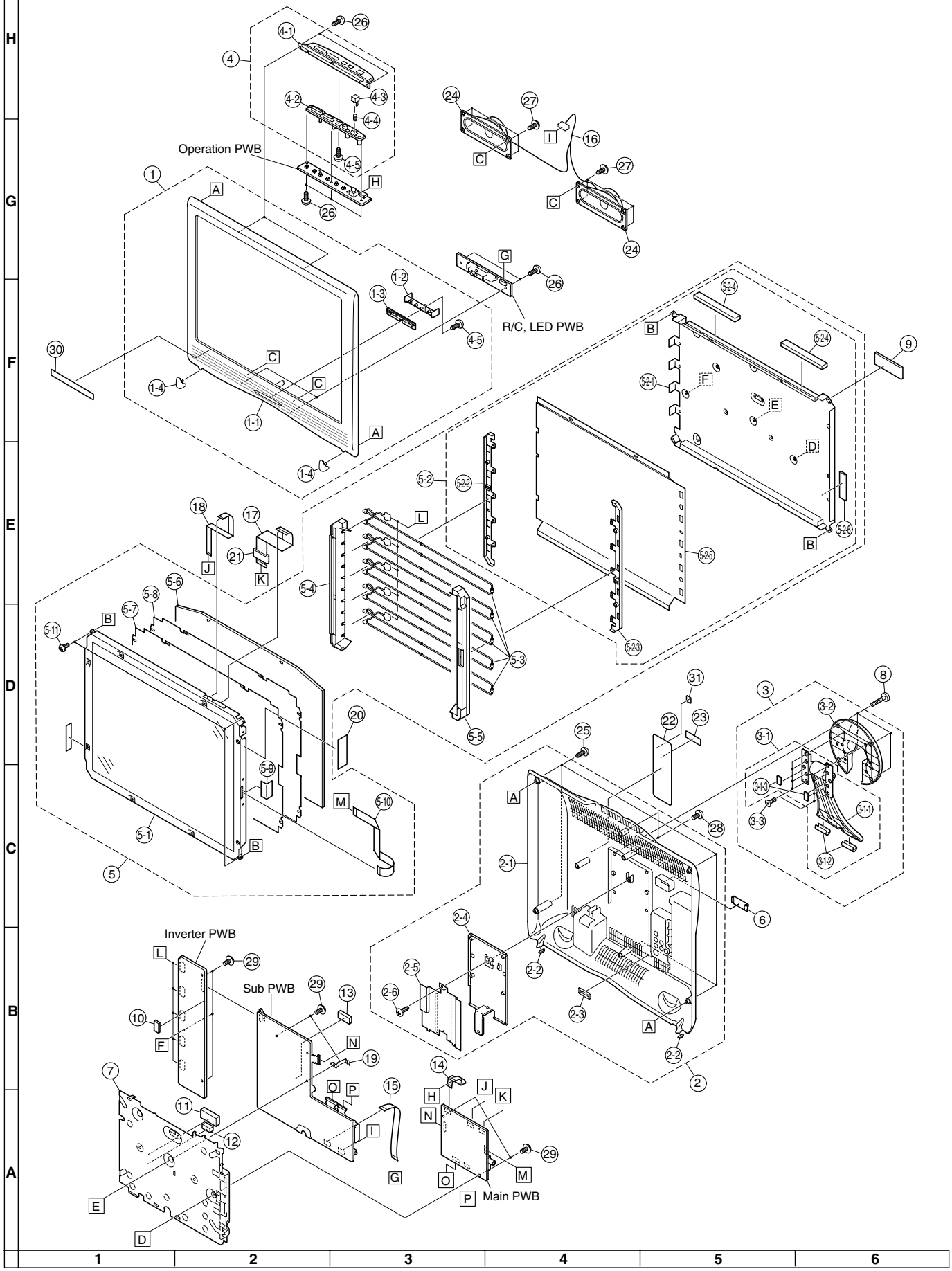
MISCELLANEOUS PARTS

FB101	RBLN-0062TAZZY	J	Ferrite Bead	AB
FB102	RBLN-0062TAZZY	J	Ferrite Bead	AB
FB103	RBLN-0062TAZZY	J	Ferrite Bead	AB
FB104	RBLN-0062TAZZY	J	Ferrite Bead	AB
FB105	RBLN-0062TAZZY	J	Ferrite Bead	AB
FB106	RBLN-0062TAZZY	J	Ferrite Bead	AB
FB107	RBLN-0062TAZZY	J	Ferrite Bead	AB
FB108	RBLN-0062TAZZY	J	Ferrite Bead	AB
FB109	RBLN-0062TAZZY	J	Ferrite Bead	AB
FB151	RBLN-0062TAZZY	J	Ferrite Bead	AB
FB201	RBLN-0062TAZZY	J	Ferrite Bead	AB
FB204	RBLN-0062TAZZY	J	Ferrite Bead	AB
FB401	RBLN-0062TAZZY	J	Ferrite Bead	AB
FB501	RBLN-0062TAZZY	J	Ferrite Bead	AB
FB502	RBLN-0062TAZZY	J	Ferrite Bead	AB
FB504	RBLN-0062TAZZY	J	Ferrite Bead	AB
FB507	RBLN-0062TAZZY	J	Ferrite Bead	AB
FB508	RBLN-0062TAZZY	J	Ferrite Bead	AB
FB531	RBLN-0062TAZZY	J	Ferrite Bead	AB
FB532	RBLN-0062TAZZY	J	Ferrite Bead	AB
FB533	RBLN-0062TAZZY	J	Ferrite Bead	AB
FB535	RBLN-0062TAZZY	J	Ferrite Bead	AB
FB801	RBLN-0062TAZZY	J	Ferrite Bead	AB
FB802	RBLN-0062TAZZY	J	Ferrite Bead	AB
FB803	RBLN-0062TAZZY	J	Ferrite Bead	AB
FB804	RBLN-0062TAZZY	J	Ferrite Bead	AB
FB805	RBLN-0062TAZZY	J	Ferrite Bead	AB
FB806	RBLN-0062TAZZY	J	Ferrite Bead	AB
FB807	RBLN-0062TAZZY	J	Ferrite Bead	AB
FB808	RBLN-0062TAZZY	J	Ferrite Bead	AB
FB809	RBLN-0062TAZZY	J	Ferrite Bead	AB
FB1201	RBLN-0083GEZZY	J	Ferrite Bead	AB
P2002	QPLGNA144WJZZY	J	Plug, 20-pin	AF
SC102	QCNCWA010WJZZY	J	Connector, 15-pin	AE
SC104	QCNCWA010WJZZY	J	Connector, 15-pin	AE
SC105	QSOCN0596REZZ	J	Socket , 5-pin	AB
SC106	QCNCWA251WJZZYS		Connector, 23-pin	AF
SC1201	QSOCNA002WJPZY	J	Socket, 20-pin	AD
SC1202	QSOCN0687FJZZY	J	Socket, 50-pin	AF
SC1203	QSOCN0206FJZZY	J	Socket, 30-pin	AF
TP101	QLUGHA006WJZZY	J	Lug	AC
TP102	QLUGHA006WJZZY	J	Lug	AC

CABINET AND MECHANICAL PARTS

Ref. No.	Part No.	★	Description	Code
1	CCABAA703WJ01	S	Cabinet A Ass'y	BB
1-1	*Not Available*	–	Cabinet A	—
1-2	HDECQA452WJSA	S	R/C, LED Cover	
1-3	HDECQA459WJSA	S	LED Cover	
1-4	HDECQA478WJSA	S	Leg Cover, x2	
1-5	XEBSN30P08000	J	Screw, x1	AA
2	CCABBA456WJ01	S	Cabinet B Ass'y	BC
2-1	*Not Available*	–	Cabinet B	—
2-2	GLEGGA042WJZZ	S	Rubber Leg, x2	
2-3	LANGFA085WJFW	J	Kensington Angle	AC
2-4	LANGTA155WJFW	S	Reinforcement Angle	
2-5	PZETKA109WJZZ	S	Insulating Spacer, x1	
2-6	XEBSN30P08000	J	Screw, x1	AA
3	CDAi-A140WJ01	S	Stand Ass'y	BB
3-1	CDAi-A140WJ02	S	Stand Base Ass'y	
3-1-1	GDAi-A140WJSA	S	Stand Base	
3-1-2	GLEGGA041WJSA	S	Rubber Leg, x2	
3-1-3	PSPAZA083WJZZ	J	Spacer, x2	AB
3-2	GCOVAB023WJSA	S	Stand Cover	
3-3	XESSN40P10000	J	Screw, x8	AB
4	CCOVAA976WJ01	S	Top Cover Ass'y	AP
4-1	*Not Available*	–	Top Cover	—
4-2	JBTN-A353WJSA	S	Operation Button	
4-3	JBTN-A354WJSA	S	Power Button	
4-4	MSPRCA014WJFW	J	Spring, for Power Button	AB
4-5	XEBSN30P08000	J	Screw, x1	AA
5	*Not Available*	–	20" LCD Panel Unit Ass'y	—
5-1	RLCDTA025WJZZ	J	20" LCD Panel Unit	DB
5-2	*Not Available*	–	Back Shield Ass'y	—
5-2-1	PSLDMA495WJFW	J	Back Shield	AW
5-2-2	LHLDZA412WJKZ	J	Lamp Holder-L(Bottom)	AG
5-2-3	LHLDZA413WJKZ	J	Lamp Holder-R(Bottom)	AF
5-2-4	PMLT-A150WJZZ	J	Light Shielding Spacer, x2	AD
5-2-5	PSHEPA226WJZZ	J	Reflection Sheet	AN
5-2-6	TCAUZA031WJZZ	J	Caution Label	AB
⚠ 5-3	KLMP-A046WJZZ	J	Lamp Unit, x5	AV
5-4	LHLDZA414WJKZ	J	Lamp Holder-L(Top)	AL
5-5	LHLDZA415WJKZ	J	Lamp Holder-R(Top)	AL
5-6	PCOVUA048WJZZ	J	Diffusion Plate	AY
5-7	PSHEPA231WJZZ	J	Reflection/deflection Sheet	BB
5-8	PSHEPA233WJZZ	J	Diffusion Sheet	AM
5-9	PSPAZA447WJZZ	J	Spacer, x1	AC
5-10	QCNW-C947WJQZ	J	Connecting Cord	AE
5-11	XBPS726P05J00	J	Screw, x3	AA
6	GCOVAA984WJKA	S	Bass-Conne Cover	AD
7	LCHSMA146WJKA	S	Chassis Frame	AR
8	LX-BZ3442CEF9	J	Screw, x4	AB
9	PSPAZA614WJZZ	S	Spacer, x1	AD
10	PSPAZA615WJZZ	S	Spacer, x1	AB
11	PSPAZA640WJKZ	S	Spacer, x1	AL
12	PSPAZA641WJKZ	S	Spacer, x1	AF
13	PSPAZA642WJKZ	S	Spacer, x1	AH
14	QCNW-B813WJPZ	S	Connecting Cord	AC
15	QCNW-B814WJPZ	S	Connecting Cord	AC
16	QCNW-C853WJQZ	S	Connecting Cord	AE
17	QCNW-C948WJQZ	S	Connecting Cord	AE
18	QCNW-C949WJQZ	S	Connecting Cord	AC
19	QEARPA125WJFW	S	Grounding Part, x1	AC
20	QEARZA041WJZZ	J	Grounding Part, x1	AE
21	RCORFA032WJZZ	J	Core, x1	AK
22	TLABMB271WJZZ	S	Model Label (LC-20SH1E/E(R)/E(F)/E(K))	AE
22	TLABMB473WJZZ	S	Model Label (LC-20SH1E(I))	
23	*Not Available*	–	Serial No. Label	—
24	VSP1104PB038A	J	Speaker, x2	AK
25	XEBS940P20000	J	Screw, x5	AB
26	XEBSN30P08000	J	Screw, x7	AA
27	XEBSN40P10000	J	Screw, x8	AB
28	XHBS830P10000	S	Screw, x2	AA
29	XHPS730P08WS0	S	Screw, x7	AA
30	TLABZA792WJZZ	S	EICTA Label	AL
31	TLABSA028WJSB	J	GOST Label (LC-20SH1E(R))	AF

CABINET AND MECHANICAL PARTS



SUPPLIED ACCESSORIES

Ref. No.	Part No.	★	Description	Code
⚠ X1	QACCBA016WJPZ	J	AC Cord (LC-20SH1E(K))	AR
⚠ X1	QACCKA006WJPZ	J	AC Cord (LC-20SH1E/E(R)/E(F)/E(I))	AL
X2	RRMCGA339WJSA	S	Wireless Remote Control	AS
X3	TiNS-B517WJN2	S	Operation Manual	
X4	TiNS-B634WJN2	S	Instruction Book (LC-20SH1E/E(F))	
X5	TiNS-B635WJN2	S	Instruction Book (LC-20SH1E)	
X6	TiNS-B636WJZZ	S	Instruction Book (LC-20SH1E(R))	
X7	TGAN-1688CEN1	J	Guarantee Card (LC-20SH1E(K))	AN
X8	TGAN-A077WJZZ	J	Guarantee Card (LC-20SH1E(R))	AE
X9	*Not Available*	–	"AA" size Battery, x2	—

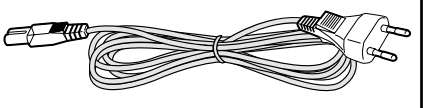
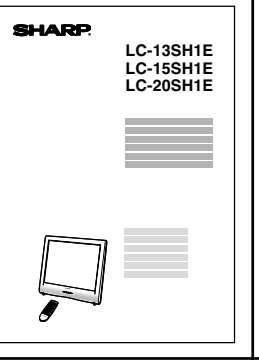
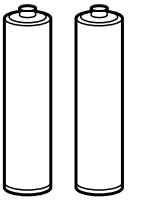
SERVICE JIGS
(USE FOR SERVICING)

	QCNW-A553WJZZ	J	Extension Cable, 30-pin (SC1203-LCD)	BA
	QCNW-A556WJZZ	J	Extension Cable, 50-pin (SC1202-LCD)	AU
	QCNW-A555WJZZ	J	Extension Cable, 20-pin (SC1201-LCD)	AU
	QCNW-D444WJQZ	J	Extension Cable, 5-pin (SC4201-SC105)	AQ
	QCNW-D445WJQZ	J	Extension Cable, 8-pin (SC4001-SC3601)	AQ
	JiGiNF-001	J	Parallel Part-IIC Interface Jig	CC

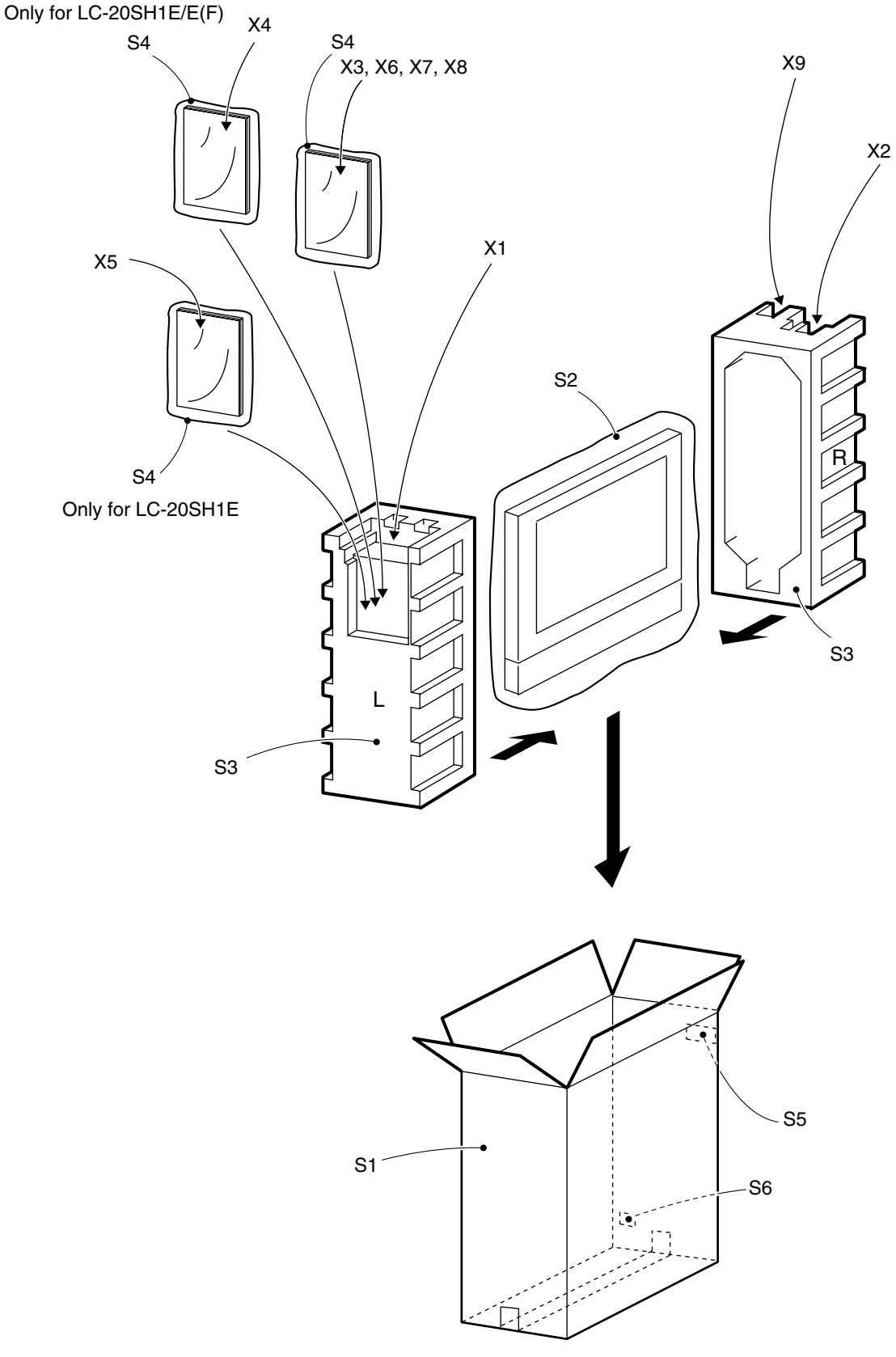
PACKING PARTS
(NOT REPLACEMENT ITEM)

Ref. No.	Part No.	★	Description	Code
S1	SPAKCB640WJZZ	–	Packing Case	—
S2	SPAKPA188WJZZ	–	Wrapping Paper	—
S3	SPAKXA620WJZZ	–	Buffer Material	—
S4	SSAKAA010WJZZ	–	Polyethylene Bag (E(R)/E(K)/E(I)x1, E(F)x2, Ex3)	—
S5	TLABKA002WJZZ	–	Carton Label, x1	—
S6	TLABSA029WJZZ	–	GOST Label (LC-20SH1E(R))	—

Supplied Accessories

AC cord	Wireless remote control	Operation manual	"AA" size batteries (×2)
X1  *Product shape may vary from country to country.	X2	X3 	X9 

PACKING OF THE SET



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TQ1841-S
Jan. 2005 Printed in Japan

Design and Production Information
Design : Japan
Production : SEES

MI. KG

SHARP CORPORATION
AV Systems Group
Quality & Reliability Control Center
Yaita, Tochigi 329-2193, Japan